THE BRITISH PTERIDOLOGICAL SOCIETY

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and today continues as a focus for fern enthusiasts. It provides a wide range of information about ferns through the medium of its publications and other literature. It also organises formal talks, informal discussions, field meetings, garden visits, plant exchanges, a spore exchange scheme and fern book sales. The Society has a wide membership which includes gardeners, nurserymen and botanists, both amateur and professional. The Society's journals, the *Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. The *Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **WWW site**: http://www.eBPS.org.uk

Membership is open to all interested in ferns and fern-allies. **SUBSCRIPTION RATES** (due on 1st January each year) are Full Personal Members £20, Personal Members not receiving the *Fern Gazette* £16, Student Members £10, Subscribing Institutions £33. Family membership in any category is an additional £2. Applications for membership should be sent to the Membership Secretary (address above) from whom further details can be obtained. (Remittances made in currencies other than Sterling are £5 extra to cover bank conversion charges.) **Airmail** postage for all journals is an extra £4, or for those not receiving the *Fern Gazette* £2.50. **Standing Order** forms are available from the Membership Secretary and the BPS web site.

(**Front cover**: *Cryptogramma crispa & Anogramma leptophylla*. Illustration from: Anne .Pratt (1855) *The Ferns of Great Britain and Their Allies the Club-Mosses, Pepperworts, and Horsetails.*)

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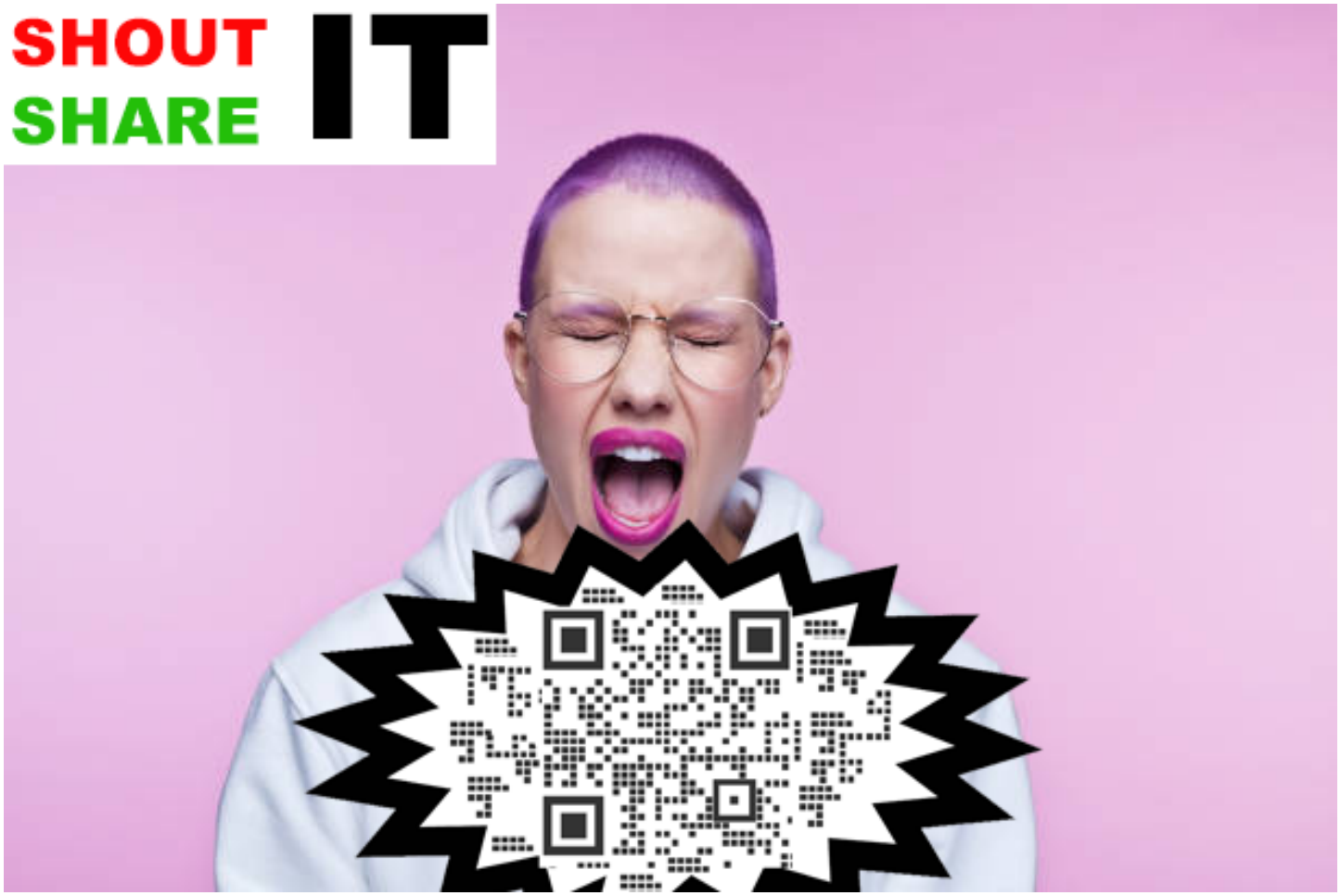
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RETIRING PRESIDENT'S ADDRESS

Martin H. Rickard

(Presented after the AGM at Cambridge University Botanic Garden, 3 March 2001)

It has been a great honour to serve as Society President for the past three years or so. Over this period the Society has moved forward into the twenty-first century, thanks to the work of the Society's Officers and Committee members. It has been hard work and it has often been noted that ferns are rarely discussed at committee meetings. Charitable status, copyright and other rather grey but important issues have taken up much of our time. I am very happy that all these matters are now largely sorted and the future of our Society is as secure as ever. We do have a couple of officer vacancies at the moment but the Society is flourishing, with membership at a record high. Services offered by the Society were never better, our regional and national meetings programmes are incredible, with trips to New Zealand in the recent past and Chile and Seattle in prospect in the next few years. Our journals are excellent and we have the honour of Royal patronage. Today, however, I want to look back, not at Society administration but at the sheer pleasure that an interest in ferns has given me amongst so many other like-minded people who make up the British Pteridological Society.

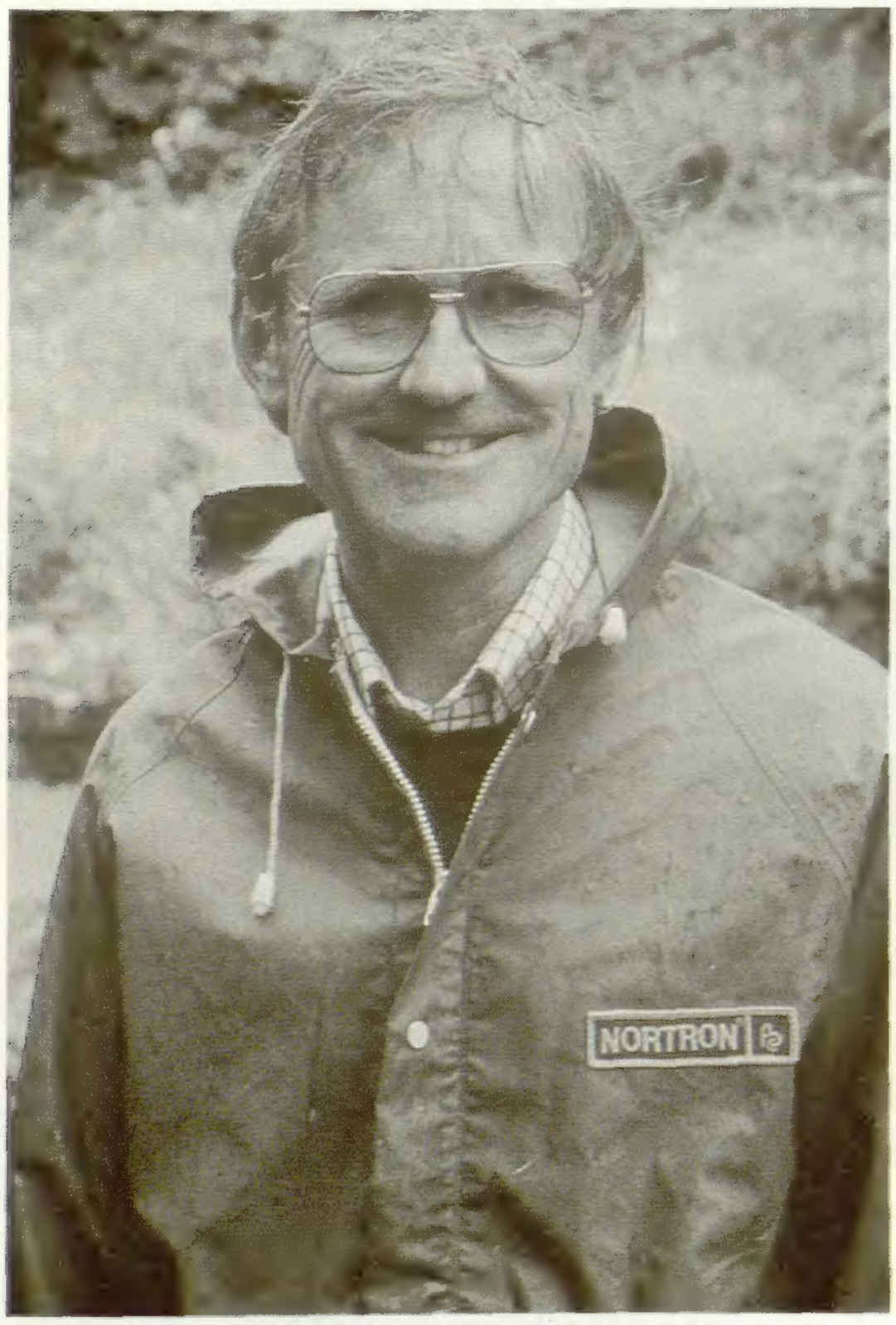


photo: *J.T. Mickel*

Martin Rickard

I first became interested in ferns in about 1965 while doing my degree in botany, but it was not until August 1966 on a camping holiday in the Lake District, when I bought the *Observer's Book of British Ferns* to help me try to identify a curious fern (it turned out to be *Cryptogramma crispa*), that I became hooked. Back in Cambridge, another young man on the course, Tony Worland, also developed an interest in ferns. We got the bug together and spent a lot of time seeing as many ferns as possible in the Cambridge area – not a particularly

good place to start! One day Tony said he was going to join the British Pteridological Society. I thought 'He's welcome' and left it at that. That autumn, 1967, Tony went on the Society excursion to Kettlewell and came back enthusing about the great time he had had. So I joined the Society (also in 1967) and in 1969 I was tempted to go on my first excursion – to Arran, really because my wife and I fancied a holiday there! We had a wonderful time! Among others, we met Jimmy Dyce, Henry Schollick and Fred Jackson. What a crowd! Meeting them was a revelation. Jimmy's rule was Christian names only. To me at 26 it seemed impolite to call retired gentlemen 40 years plus my senior by their Christian names but we did, and of course in a very short time it became second nature. The whole atmosphere was great, and I was hooked on British Pteridological Society meetings.

photo courtesy *M.H. Rickard*

James Merryweather & Martin Rickard
Arran 1969

Very soon Tony and I started organising meetings in East Anglia for the Society. Our first was at Barton Mills, when we took the party to Scoulton Mere to see the very rare *Dryopteris cristata* and *D.* x *uliginosa*; both are apparently extinct there now. Other meetings followed, at How Hill in Norfolk in 1970 and at Lowestoft in Suffolk. By this time Jimmy Dyce was a good friend and Tony and I helped him organise the national meetings. For many years Tony was Meetings Secretary. There were many highlights. At Moffat in 1972 I found a small tussock of *Woodsia ilvensis*, the only time I have ever found either native species of *Woodsia* in a previously unrecorded locality. At Sedbergh in 1974 we shared a cottage with James Merryweather and his family and had a great time exploring the area. On one foray Jimmy slipped off some rocks above a mountain pool and slipped right under the water. Fortunately Dr Bellringer was with us and insisted that Jimmy return to the hotel for a hot bath. In 1975 we tried holding a 'snow meeting', this was a winter excursion exploiting the evergreen nature of many ferns. We visited Motts Mill in Sussex and found *Hymenophyllum tunbrigense* and *Dryopteris aemula* in fine fettle. Only a few members attended but we had a good time!

I first joined the Society's Committee in 1972 and have been a Committee member virtually continuously since then. I still remember my first meeting and being in awe of our then President, Professor Irene Manton. Apart from Jimmy Dyce, the main fern man at that time was Clive Jermy. Happily he is still very much involved with the Society. His enthusiasm washed off on all us younger members; he told us where we could see exciting ferns and pointed out the best literature sources.

As the years went by I gradually became more interested in the cultivars of British ferns, largely due to Jimmy's coaching. As a consequence, more and more time was spent gardening and visiting gardens. One of the most enjoyable meetings I organised was the 1986 trip to gardens old and new around Usk in Gwent. This was only surpassed by the 1991 Centenary Symposium and particularly the associated garden tour. A party of forty people visited six gardens in three days. Certainly the gardens were a pleasure, but the company of fellow enthusiasts from around the world was outstanding. To meet, and have time to chat to, the likes of John and Carol Mickel, Barbara Joe and Tak Hoshizaki, Sue and Harry Olsen and Judith Jones is an experience I shall always relish.

Away from Society meetings, the love of ferns always seemed to lure me to ferny parts of the world! I was very lucky to live in the Savoie region of France for four months of each of four summers from 1973. Each year I had many Society visitors, including Jimmy Dyce, and inevitably we saw many ferns. The highlight was probably finding (very easily) *Asplenium jahandiezii*, one of the world's rarest ferns, in the Grand Canyon du Verdon. Other business placements were useful! I had two months in South Africa, giving me my first taste of non-European species. Of course holidays were often (usually!) ferny. In 1990 we were invited by Bridget and Michael Graham to the Caribbean island of Nevis to explore the fern flora. This was a wonderful experience. Not only did we enjoy the chance to botanise in a tropical paradise but we also enjoyed marvellous company. I shall forever be grateful to Bridget and Mike for making this wonderful experience possible. In 1988 Christopher Fraser-Jenkins told me that Professor Reichstein in Basel, Switzerland had one of the best collections of hardy ferns. That was it! I wanted to see his collection, so I wrote to the professor who said I would be welcome but that at his age (95) he did not make appointments more than one month into the future. Anyway, I contacted him again just before our camping holiday to Switzerland was due and he said he would be pleased to see me. His collection was wonderful and the professor showed me round for about two hours. I asked if we could see his collection at his other home on the Italian border but he said he could not travel, although he could give me the key and we could stay in his house as long as we liked. There were eight of us – we stayed the best part of a week! I spent hours in this garden full of so many uncommon ferns, all beautifully grown in the soft southern climate. Can you believe that one plant of *Dryopteris wallichiana* was eight feet tall?! His generosity and hospitality is typical of so many people in the fern world.

photo: *M.H. Rickard*

Dryopteris wallichiana in T. Reichstein's garden in southern Switzerland

Closer to home there were many ferny discoveries to be made. On a BPS excursion to North Wales in 1972 I found a beautifully serrated form of *Blechnum spicant.* It has been named 'Rickard's Serrate' although I feel a bit of a fraud about it! The plant was

growing in the middle of the small footpath/animal track and I was first in line. Immediately behind me was Jimmy Dyce – he'd have seen it for sure! Another 'triumph' was re-finding *Asplenium trichomanes* subsp. *pachyrachis*. Our late member André Labatut showed me this species while I was on holiday in France. I recognised it as a 'variety' of *A. trichomanes* that I had found years before in the Wye Valley! E.J. Lowe, amongst others, knew of it in Victorian times, but it became lost as 'just another Victorian cultivar of no great merit'. In truth our predecessors did not miss much, but it shows there are still things to be re-discovered even in these heavily botanised islands!

Over the years up to 1990 I built up a huge collection of ferns, something like 1,000 different taxa, most of them fully hardy. This was achieved by the generosity of many people, initially from fern growers such as Jimmy Dyce, Ray and Rita Coughlin, Jean and Jack Healey and Philip Coke, as well as nurseries like Reginald Kaye and Fibrex. Latterly my collection benefited greatly from the exploits of that great plant hunter Christopher Fraser-Jenkins. Christopher roamed the world in search of specific ferns for Professor Reichstein's research and *en route* he of course saw many plants of interest. Material of many of these was then cultivated by keen growers including Richard Rush, Gerry Downey, Clive Brotherton and myself. Christopher currently lives in Kathmandu in Nepal.

In 1989 my involvement with ferns led to my wife and I starting a fern nursery on a very small scale. It was intended to make a few pennies and to be fun! In time, circumstances dictated that the scale of operations had to be greatly increased and today the nursery is very successful and profitable. The downside is that running a nursery leaves little time for much else; work tends to be seven days a week in summer. On the plus side, meeting many interesting people makes the work very enjoyable. Through the nursery I have met Society members who would not venture out to meetings. I have also encouraged other customers to join our select band. At Royal Horticultural Society flower shows I am often surprised to meet old friends from home and abroad, for example past President Gwladys Tonge and from America, Nancy Swell. These shows raise the profile of the nursery and, hopefully, of ferns. A few years ago I was invited by David and Charles to write a fern book in the Plantfinder's Guide series. John Bond of the Savill Gardens at Windsor was originally approached, but his wife became ill. Sadly she died and John himself then had a long illness making it impossible for him to continue. I took over the book and also took over some of his fern-judging role for the Royal Horticultural Society. Sadly he too has since died. I wrote the book in a few months, with difficulty, in between flower shows! I was fortunate to receive a lot of help from Society members, notably Clive and Doreen Brotherton and Rita Coughlin. The book was eventually published in April 2000 and sold out in nine months, much to my surprise. It has been reprinted now and even translated into Dutch!

All of this time spent enjoying ferns and fern people culminated in me being elected President of our Society. To have held this position has been a great honour that would never have seemed possible all those years ago when I first met Jimmy Dyce via Tony Worland. I doubt I have been the best President, but I hope I have at least been satisfactory. I feel very humble, especially since I know that the nursery did prevent me giving as much time to the Society as I would have liked. For the future, one thing I know for sure is that members of the British Pteridological Society will continue to create a wonderful friendly atmosphere at all meetings, and of course informally whenever they meet together away from Society business.

NATIONAL FIELD MEETINGS 2001

GUERNSEY, CHANNEL ISLANDS – 30 March - 2 April

Friday 30 March **Trevor Taylor (a.m.) & Patrick Acock (p.m.)**

Having endured a seemingly endless spell of dismal, cold and wet weather over the previous few months in England, it was wonderful to arrive at Guernsey airport on a dry, bright and clear spring morning. This long weekend field meeting was the culmination of plans which Andrew Leonard and I had talked about for the past three years or so during our early spring ferning trips to the island.

After the usual winter period of hibernation from botanical fieldwork, prolonged even more this year as a consequence of the rightly imposed restrictions connected with the dreadful foot and mouth outbreak, even the taxi ride from the airport through the country lanes was a joy. The island's distinctive hedgebanks were festooned with the fresh green, fleshy, round leaves of *Umbilicus rupestris* (navelwort) interspersed with eye-catching displays of *Primula vulgaris* (primrose) and *Viola riviniana* (common dog-violet), while *Smyrnium olusatrum* (alexanders) flanked the roadsides in abundance. It was evident from the many pools of standing water still visible in all low-lying areas, that Guernsey, much like the rest of the British Isles, had experienced its wettest winter for many years. Such conditions should bode well for the island's famous trio of Mediterranean pteridophyte specialities, namely *Isoetes histrix* (land quillwort), *Ophioglossum lusitanicum* (least adder's tongue) and *Anogramma leptophylla* (Jersey fern).

The formalities of checking-in at The Vazon Bay Hotel were quickly dispensed with and attention was directed towards a reconnoitre of nearby Fort Hommet headland. In view of the closure of much of the British countryside over the preceding few months (disinfectant procedures had been observed on arrival at Guernsey airport), it felt wonderful and very liberating just to simply walk on earth in the countryside again. A search on hands and knees among the rock outcrops revealed numerous minute, narrow leaf blades of *Ophioglossum lusitanicum*, along with several small fertile spikes, within a square metre patch of moss. In the short turf around the base of the rocks the delightful tiny mauve flowers of *Romulea columnae* (sand crocus) were fully open thanks to the bright spring sunshine.

Mission accomplished, it was time to head back to the hotel for the arrival of the first pteridologists, namely Andrew Leonard, Jonathan Crowe and Elise Knox-Thomas. After brief introductions, the party set off back to Fort Hommet to admire the *Ophioglossum* and while Andrew, Jonathan and Elise proceeded to the westernmost tip of the headland to view a population of *Asplenium marinum* (sea spleenwort) that had colonised the fortifications, I carried out a search for *Isoetes histrix* with the aid of a map and detailed instructions kindly provided by Mr Nigel Jee, one of Guernsey's most acknowledged naturalists. A single specimen was detected in an area between two bunkers, exactly as pinpointed on the map. On joining the hands and knees search, firstly Jonathan and then Elise quickly focused on several more plants growing in sparsely vegetated hollows among a group of small boulders. A further site on the headland, where *I. histrix* was formerly known to occur but which is thought to have been lost due to the fire brigade washing away the soil to extinguish a fire, would be searched the next day. The group headed back to the hotel to meet the Acock family, Matthan Schout (a Dutch pteridologist) and Anne Beaufoy.

After lunch we walked along a footpath beside the hotel where we saw large clumps of *Oenanthe crocata.* As we progressed along the hedgerow we saw in turn *Athyrium filix-femina*, *Asplenium scolopendrium*, *Polypodium interjectum*, *Pteridium aquilinum* and *Equisetum arvense* before encountering *Asplenium obovatum* subsp. *billotii*, a favourite of mine and a fern that is so common in Guernsey; in the rest of mainland UK we are used to seeing only the odd few plants, apart from in some areas of South Devon. Further on we saw *A. adiantum-nigrum.* We walked along a number of lanes until our leader told us we now had to look out for *Anogramma leptophylla*. Many descended to their knees and crawled along the lane. A few found the plants for themselves. Trevor mentioned that he had visited the site for over five years and observed that the Jersey fern does drift up and down the road a little. We returned along other lanes to see fertile spikes of *Equisetum arvense* and a large colony of *Asplenium trichomanes* on a barn wall.

In the evening we went to a restaurant in St Peter Port and after dinner we were treated to a fine lecture by Nigel Gee, illustrated with slides, on the flora and geology of Guernsey.

Saturday 31 March **Graham Ackers**

The proximity of our hotel in Vazon Bay to the Fort Hommet peninsular enabled most of our party to make the short walk to what was to be our first site of the day, already previewed by some of the group the previous day. Having hired two mini-buses as our transport for the weekend, the drivers and their assistants arrived at the site a short time later. The peninsular is dominated by Fort Hommet, the original structure of which has been in existence since the end of the 17th century. Part of the peninsular is a nature reserve, having a variety of habitats including saltmarsh, stabilised sand-dunes, heathland and wet meadow. In a relatively small area of the latter were a number of fertile spikes of *Ophioglossum lusitanicum*, together with some barely visible fronds. The plants were peeping from an expanse of moss, which superficially appeared to be overwhelming the ferns. The tiny size and semi-obliteration of the ferns posed a photographic challenge that I, for one, was unable to meet! *O. lusitanicum* is one of Guernsey's specialities, and as such figured on one of the handsome set of four stamps issued by the Guernsey Post Office in 1976. I have to say that the image on that stamp gives a far better impression of the morphology of *O. lusitanicum* than the actual plants that we saw!

Another Guernsey fern speciality figuring in the stamp set is *Isoetes histrix*. Rather more patches of this plant were seen, typically occurring in damp (but not wet) ground, with few competing plants (spring squill, buck's horn plantain and mosses were present) in the immediate vicinity. Plants of *Asplenium marinum* were present on the walls of Fort Hommet itself.

On the previous evening Nigel Gee had referred to a specimen of our next Guernsey fern speciality (also on the stamps!) as 'Grandaddy'! Our next site visit, on the corner of a main road and a 'green lane' in the St Saviour area, was to see this venerable specimen. The plant was *Asplenium* x *sarniense*, which is the hybrid between *A. adiantum-nigrum* and *A. obovatum* subsp. *billotii*. In this case, it was clearly morphologically intermediate between the two parents, but there were doubts over the identity of some of the other candidates for this taxon that we were to see later during the weekend. 'Grandaddy', although a large plant, was somewhat obliterated by other vegetation (mainly nettles), which was soon cleared to enable better views and photographic opportunities. Seen during a short stroll further along the green lane were *Polypodium interjectum*, *Asplenium adiantum-nigrum*, *A. obovatum* subsp. *billotii* and *Pteridium aquilinum*.

Determined to see all the 'goodies' in one go (!), our final site for the morning was to see the fourth Guernsey speciality, *Asplenium* x *microdon* (the final subject of the Guernsey stamp set). To see this, we travelled to the car park used when visiting the German Tunnels tourist attraction (in fact closed for the 2001 season) in the Sous L'Eglise area. The roads around the church were classic Guernsey shady lanes, with rich bank side vegetation and overhanging trees. Amongst the vegetation we were shown four plants of *A.* x *microdon.* It is the hybrid between *A. scolopendrium* and *A. obovatum* subsp. *billotii* and consequently has a rather startling and distinctive appearance, although bears a vague resemblance to *Asplenium marinum*. To my mind, this was the star of the 'Guernsey quartet'. Having said that, because the new season's fronds were yet to flush, some of the specimens we saw were a little tatty (although one looked very fine). Other ferns observed along the banks were *Polypodium interjectum* (with particularly large fronds), *Asplenium scolopendrium*, *A. obovatum* subsp. *billotii*, *A. adiantum-nigrum*, *Dryopteris dilatata* and *D. filix-mas*.

After lunch at the Fleur de Jardin (a delightful hostelry), we explored the lanes to the south of the King's Mills area. Observed soon were a few plants of *Asplenium ruta-muraria* on a garden wall. This is an uncommon plant in Guernsey, and was our only sighting. Along the lane-side banks (mainly field boundaries) were *A. obovatum* subsp. *billotii*, *A. adiantum-nigrum*, *A. scolopendrium*, *Polypodium interjectum* (probably), *Pteridium aquilinum*, *Athyrium filix-femina*, and one more *Asplenium* x *microdon.* However, the main reason for a ramble in this area was to see what is effectively considered to be a Jersey speciality (and as such is featured on one of *their* stamp sets!), *Anogramma leptophylla.* In Jersey this fern is known from several sites, but in Guernsey, at this one only (already visited by some members the day before). Two small patches were observed low down on the banks, calling for some hands-and-knees observations! It was only in this zone of the bank that the vegetation was sufficiently sparse to allow this species to gain a hold. Apparently, the plants do not appear in exactly the same spot each year (they are annuals), but 'move around'.

Some members of the party then went on to see further plants of *Asplenium* x *microdon.* One specimen of 'average' appearance was seen at Les Buttes in St Pierre-du-Bois, and two others (one 'poor' and one rather handsome) in the Les Arquets area.

Sunday 1 April **Jonathan Crowe**

On what turned out to be the hottest day of the year so far, eighteen members set out to see what further pteridophytes the island might reveal.

First stop was the residential Rue du Pont Vaillant in Vale to see the most prolific of several small populations of *Asplenium ceterach*, a scarce plant on Guernsey and only found in this area. The rustybacks were found inhabiting cracks between the granite blocks of a front garden wall. The most numerous and best plants were occupying the garden side of the wall, so one of our leaders, displaying his characteristic charm and tact, knocked on the front door and, having disturbed the resident and a large dog from their Sunday morning lie-in, managed to obtain permission for us to enter the garden. The plants were in fine shape, no doubt having benefited from the prolonged period of wet weather.

We searched in vain for the *Phymatosorus diversifolius* that was last reported several years ago on a granite wall in La Fosse André on the outskirts of St Peter Port. The kangaroo fern was thought to be an escape from the Caledonia Nursery that used to occupy the adjacent site. La Fosse André is one of several 'water lanes' on Guernsey,

which carry part of an ancient irrigation system. The constantly running water, shade and shelter provided by the high wall has created a microclimate and habitat for a wide range of ferns. The top and upper portion of the wall was thickly clothed in *Polypodium interjectum*, together with isolated plants of *Asplenium scolopendrium* and *A. trichomanes* subsp. *quadrivalens*. Beside the ditch we found *Athyrium filix-femina*, *Asplenium obovatum* subsp. *billotii*, *Dryopteris filix-mas*, *Pteridium aquilinum* and a single spike of *Equisetum arvense.*

In the middle of St Peter Port we entered the attractive Candie Gardens with its many unusual trees and shrubs and beautiful views overlooking the harbour. Isolated plants of *Asplenium scolopendrium*, *A. trichomanes* subsp. *quadrivalens*, *Athyrium filix-femina* and *Dryopteris filix-mas* had all escaped the attention of the gardeners. A small pool had a thick covering *of Azolla filiculoides* that was tinged red, thought to be due to colder conditions earlier in the season. On the pool bank was a *Cyrtomium falcatum*. Leaving the gardens we walked round to St Julian's Avenue where on a sunny high granite retaining wall our leader showed us the many small plants of *Adiantum capillus-veneris* that he had found on a previous visit to the island. The *Adiantum* was growing with a great variety of associated species including the ubiquitous *Erigeron karvinskianus*, *Centranthus ruber*, *Asplenium scolopendrium*, *A. adiantum-nigrum*, *A. trichomanes* and *Hypericum* sp.

Our next port of call was Fermain Valley, where we walked from the car park down the wooded valley, stopping to admire the bromeliads and other exotic introductions. Of great interest in the valley bottom, beside a small stream, was an extensive patch of *Selaginella kraussiana*. Isolated plants of *Asplenium obovatum* subsp. *billotii* grew on both sides of the path and in the caves of Fermain Bay.

We retraced our steps up the valley to La Favorita Restaurant, passing a splendid *Dryopteris affinis* in the gardens, where we enjoyed the hot sun and views across the bay over an excellent lunch. Afterwards we moved on to Petit Bot Bay where we followed the coastal path above Portelet Bay. Here we found a wealth of ferns and spring flowers beside the path. These included *Polypodium interjectum* and a few plants of *P. cambricum*, *Asplenium scolopendrium*, *A. obovatum* subsp. *billotii*, *A. adiantum-nigrum*, *Polystichum setiferum*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. affinis*, *D. dilatata* and *Pteridium aquilinum*, intermingled with the flowers of sea campion, red campion, primroses, violets and bluebells. On returning to Petit Bot Bay we admired, in equal measure, the very large fronds of *Asplenium marinum* growing in the walls of a passage taking a stream under a café and the Guernsey cream tea we ate at the café!

On leaving Petit Bot, an unintended detour to Le Bigard led us to our ninth specimen of *A.* x *microdon* to be encountered during the visit.

Our final destination was Pleinmont in the far south-west of the island. Walking up through a sheltered wood we found *Polypodium interjectum*, *Asplenium scolopendrium*, *A. adiantum-nigrum*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. dilatata* and *Pteridium aquilinum.* In a nearby lane was a single plant of *Asplenium* x *sarniense* growing on a hedgebank within a spectacular mass of *Asplenium obovatum* subsp. *billotii*.

Monday 2 April **Andrew Leonard**

This was our last day of ferning. After breakfast, six of us set out in the mini-bus, closely followed by the Ackers and Ripleys in a hire car. We went to the reservoir at St

Saviours and walked around the lanes. Here we saw the usual 'suspects' and also a tree-fern in a private garden and *Asplenium* x *sarniense* on a lane-bank. At around 11 o'clock we struck off for St Saviours church. Here the group was able to show Mr Ripley (who had arrived the previous evening) a few of the local *A.* x *microdon* sites.

Now, with the weather turning to rain, the mini-bus gang split up from the Ackers/Ripleys and strode off back to the reservoir for the mini-bus to take Anne Beaufoy to the airport. After another look at the *A. ruta-muraria* at King's Mills for the benefit of yours truly, we had our last splendid lunch at the hotel and picked up our luggage. We then dropped off the Acocks and Jurgen Schedler at the airport and the remaining three went to Rue de Genette, where Elise cleverly found one more (our tenth) *A.* x *microdon.* It was by now raining quite heavily and we were glad to return to the airport at the end of our Guernsey adventure.

MID-CORNWALL – 22-24 June **Ian Bennallick & Rose Murphy**

Six members met at the Victoria Inn at Roche (10/988617) on the Friday evening and, over a pint and a tasty meal, discussions concerning the weekend centred on interesting areas to visit and the species to be seen. Chris Page had brought along some fresh material of both *Pteridium aquilinum* subsp. *aquilinum* and the more upright looking subsp. *fulvum* (collected from nearby heathland at Tregonetha Downs – 10/958631) and he ably demonstrated the differences between the two.

On a beautiful warm and sunny Saturday, twelve members gathered at the Victoria Inn and the day's itinerary was discussed with the leader, Ian Bennallick. Foot and mouth restrictions had recently been relaxed in the thankfully uninfected area, so all anticipated sites were open. Mid-Cornwall has a good variety of ferns and habitats so variety was the theme, with several species to be seen.

The first site visited was St Dennis Junction (10/934598) where there had once been a railway junction and a cement-block works. The junction is at the edge of Goss Moor National Nature Reserve. This area, with its good variety of habitats (over 450 species of vascular plants have been recorded in the 1km square), proved especially good for horsetails. *Equisetum telmateia*, rather local in Cornwall, was abundant on the waste areas, and between the old railway tracks and sleepers there was much *E. arvense*, *E. palustre*, *Asplenium adiantum-nigrum*, *Athyrium filix-femina*, *Blechnum spicant* and *Dryopteris dilatata.* Adjacent to the waste area, old gravel pits were ringed by *Equisetum fluviatile* and *E. palustre* and in a flooded track a huge patch of *Pilularia globulifera* grew with more *E. fluviatile* and *E. palustre*, plus the hybrids *E.* x *dycei* and *E.* x *litorale*. Where the track was slightly drier, *E.* x *willmotii* was seen with both parents, *E. telmateia* and *E. fluviatile*, its identification being confirmed by Chris Page the following day.

The meeting then moved on to an area of wet heath and willow scrub north of Castle-an-Dinas (10/945635) to see the only population of *Thelypteris palustris* in Cornwall. This site is interesting in that until the mid-1950s the area, now covered with lush ferns and willow, was open and very disturbed. Tailings from a wolframite (tungsten) and tin mine on Castle-an-Dinas were washed down into the site. Here the spoil and the tailings were reworked for minerals. The site is difficult to reach as it is drained by a deep ditch – at least one person lost his boots! Many sterile and fertile fronds of *Thelypteris palustris* were seen, along with especially abundant *Osmunda regalis* and *Athyrium filix-femina.* It was noticed that several fronds of all the ferns were showing signs of

damage and various theories were put forward to explain this, including late frosts, the prolonged dry spell in May/June in Cornwall, or the concentration of the sun's rays through rain droplets collected on the frond tips! In pans nearby (probably the last remaining signs of the previous disturbance), there were poorly growing plants of ling (*Calluna vulgaris*) with *Equisetum palustre*, *E. fluviatile* and the hybrids *E.* x *dycei* and *E.* x *litorale*, both of the last being confirmed by Chris Page on the Sunday.

A quick visit was made to a site near Demelza (10/983635) to see abundant *Dryopteris aemula* in a habitat that is typical for Cornwall. This was a shady roadside hedgebank kept open by strimming and maybe the scraping wheels of passing tractors and milk tankers. Lunch was taken back at the Victoria Inn where the afternoon's itinerary was discussed.

The site visited next was Roche Rock (10/990595), an impressive rocky outcrop (a mass of schorl comprising tourmaline and quartz) on the edge of the Hensbarrow granite. Roche Rock is at the northern end of the St Austell china clay district. The ruins of a 15th-century chapel are sited on one side at the top of the outcrop. Its gothic appearance has led to its use in several films. The heath and boulder area around the base of the Rock supported a good cover of *Pteridium aquilinum* subsp. *aquilinum* where, in spring, wood anemone (*Anemone nemorosa*), bluebell (*Hyacinthoides non-scripta*) and pignut (*Conopodium majus*) are present in quantity. Also seen here, in slightly damper ground with *Oreopteris limbosperma* and *Osmunda regalis*, was a large population of *Pteridium aquilinum* subsp. *fulvum*. However, the main reason for visiting Roche Rock was to check the several small populations of *Hymenophyllum tunbrigense* that grow in the damp crevices between the rocks and boulders. This fern had been refound in 1998 at the site where it was last recorded in 1909! Four populations were found but all were very desiccated and a small gorse fire had almost destroyed one colony.

On the way to the final site the group stopped at a granite hedgebank at Penwithick (20/032567) to observe the many plants of *Asplenium obovatum* subsp. *lanceolatum* and *A. adiantum-nigrum* growing together in the crevices between the hedge stones. Although often found along the coast in both rock crevices and on coastal hedgebanks, *A. obovatum* subsp. *lanceolatum* can be abundant on some inland hedgebanks, especially in some of the granite areas. The site at Penwithick seemed a good place to search for a possible hybrid between the two species (*A.* x *sarniense*) which has yet to be found in Cornwall. Although the fronds of some of the plants were rather intermediate in their appearance, it was felt that the material was just very variable and the hybrid was not present. This was eventually confirmed by Fred Rumsey (Natural History Museum). A short detour was made here so that the group could see Cornish moneywort (*Sibthorpia europaea*) growing at the base of a ferny ditch.

The last locality for the day was a small right of way, locally known as 'Kissing-gate Lane', at Tywardreath near Par (20/081543). A local Cornwall Fern Group member, Philip Hunt, actively recording in this area, had noted an unusual fern growing on the lane hedge for at least 40 years. It proved to be *Polystichum munitum*, a native of western North America that had probably become established here as an escape from neighbouring gardens. Growing with *Asplenium scolopendrium*, *Dryopteris filix-mas* and *Polystichum setiferum*, it was the first record for Cornwall and only the second for Great Britain as regards sites in the wild. This was not to be the final find. Further down the lane one member found an even more unusual fern, one that seemed to have the characteristics of both *P. munitum* and *P. setiferum* – a hybrid between the two species! The find was all the more fortuitous as the lane had been strimmed the day before and the strimmer had

stopped not far short of the plant! Much film was used and we also managed to see instant pictures on one member's digital camera. A herbarium specimen was collected (one fertile frond) and the new find is to form the subject of a special paper.

All members of the group returned to the Victoria Inn for an evening meal, and the discussions that accompanied this were lively and mostly about ferns. An invitation was extended to the group by the day's leader to a mid-summer bonfire that was to be lit that night on the hill fort of Castle-an-Dinas. The ancient custom of celebrating Midsummer Eve with a bonfire goes back to pagan times and has in recent years been revived by The Old Cornwall Society. There was another motive for this invitation, an old record for *Botrychium lunaria* for the hill fort! Three members joined the leader and though the light was fading, it was still possible to search the ancient, sheep-grazed ramparts. Though the habitat was deemed very suitable for the moonwort, it was felt that it was too late in the year to find it. However, though this particular search was unsuccessful, hot pasties and tea beside a roaring bonfire was felt to be a good end to the day.

The meeting on Sunday focused on only two sites, both in West Cornwall – Penjerrick Gardens and Kennall Vale. It proved a good contrast to the previous day.

photo: C.N. Page

Penjerrick Garden, Cornwall

Matt Stribley, Pat Acock, Ian Bennallick, Jonathan Crowe (*at back*), Jennifer Walls

In the morning thirteen members, and the leader for the day, Chris Page (ably helped by his enthusiastic young daughter, Tamsin), met at the main gate of Penjerrick Garden (10/780309). It is one of three valley gardens established in this area by the Fox family during the 19th century and the only one still to remain in their possession. Chris Page gave us an introductory talk and then, with his expert guidance, we explored the garden, which is separated by a small road into an upper and lower garden. The lower garden, which we reached over a rather frail bridge, has the best ferns. Ferns, both native and introduced, included *Athyrium filix-femina* (huge plants, head high!), *Blechnum cordatum* everywhere, *Onoclea sensibilis* by the lakes, *Dryopteris affinis* (mainly subsp. *affinis*), *D. dilatata* and *D. filix-mas*. *D. crispifolia* was looked for (it had been

seen in 1997) but could not be found. *Polystichum setiferum* and *P. polyblepharum* were present and *Selaginella kraussiana* was extensively naturalised in the lawn in the upper garden (10/779307).

Other ferns present were *Asplenium scolopendrium* and *Polypodium interjectum* but *Todea barbara* (seen in 1997) was not refound. The dicksonias were huge, 25 feet or more, indeed some of the finest dicksonias to be found in Cornwall grow in this garden. Many young plants were becoming establishing in recently excavated ditches and the trunk of one tree-fern had been sectioned to show the central 'stele' and the massive area of surrounding roots. A new gravel path by the avenue of dicksonias and some fresh planting were the subject of a recent TV gardening programme.

After lunch, the afternoon was spent in Kennall Vale (10/753375). This is situated on the eastern edge of the Carmenellis granite and the short, deep wooded valley is now a Reserve owned by the Cornwall Wildlife Trust. Formerly a site for the manufacture of gunpowder (such operations ceased in 1910), the valley is now set with a number of old ruins, waterwheels and leats. The leats and runnels of water that in wetter years run along and down the valley sides were dry and it proved difficult to find much of the *Hymenophyllum tunbrigense* for which the valley is famous. However, the ferns recorded included *Asplenium trichomanes* subsp. *quadrivalens* and *Polypodium interjectum* on old mortared walls, and *Athyrium filix-femina*, frequent *Dryopteris affinis* subsp. *affinis*, *D. dilatata* and *D. filix-mas* on the woodland banks. *Asplenium scolopendrium*, *Polystichum setiferum* and *Pteridium aquilinum* were also frequent and some *Hymenophyllum tunbrigense* was found on the north-western side of the valley.

photo: C.N. Page

Colin French, Jonathan Crowe & Pat Acock in Chris Page's Garden, Cornwall

The meeting ended at the home of Chris Page and his wife, Clare, and we were grateful to them for providing us with a splendid Cornish cream tea!

SOUTHERN LAKE DISTRICT – 28-31 July

This meeting unfortunately had to be cancelled owing to foot and mouth disease.

LECTURE MEETINGS AND DAY VISITS 2001

SPRING INDOOR MEETING, CAMBRIDGE – 3 March

A.R. Busby

The President, Martin Rickard, welcomed 44 members to the Spring Indoor Meeting in the Gilmour Building at Cambridge University Botanic Garden and Graham Ackers outlined the day's programme. The morning would comprise four talks under the collective title 'The Americas'.

Our first speaker was Alan Ogden who presented a talk entitled 'A Walk in Ecuador'. We were treated to a succession of attractive slides of tropical rain forest near Quito. Alan explained that it was a trip organised for wildlife photographers (mostly naturalists) and that he was the only pteridologist in the group. The cloud forest is at quite a high altitude (over 8,000 ft) so there were no problems with biting insects, flies or leeches; there were also no large predators and no snakes were seen.

Alan showed slides of many ferns, a large number of which remained unidentified. However, knowledgeable members present were able to put tentative names to some species. Among the more obvious treasures were species of *Adiantum*, *Asplenium*, *Blechnum*, *Campyloneurum*, *Dicranopteris*, *Elaphoglossum*, *Pityrogramma*, *Polystichum*, *Polypodium* and *Vittaria.* I was impressed with the heavily thatched modern hotel, which was very well hidden in the forest. The thatch on the roofs was providing a home for several enterprising epiphytes such as polypodiums and pyrrosias. Alan explained that the growth of this forest was so lush that the paths had to be walked with machetes every ten to twelve days to keep them clear.

The second speaker was Dr Sandy Knapp, an American research botanist presently working at The Natural History Museum, London. Dr Knapp's talk, entitled 'Tools for Fern Identification in Latin America', gave us an insight into the problems of researching in Latin America. One of Dr Knapp's interests is publishing identification floras in the native language of the region (Spanish) so that local scientists can become more involved in finding ways to preserve the quickly disappearing habitats. To this end, Dr Knapp and others have been working on *Flora Mesoamericana* – the first volume of which deals with ferns and fern allies. It is published in Spanish but has no illustrations so is really only usable by trained botanists. Dr Knapp and her research group also work on a variety of different field guides with a wide variety of formats and levels so that everyone from school children to politicians may be encouraged to take an interest in their local flora. Dr Knapp has also published a relatively pocket-sized field guide with black and white illustrations and the text in Spanish: *Helechos de Mbaracayú.* The area covered is in eastern Paraguay, forest very similar to that found near Iguassu Falls in Brazil. Dr Knapp also drew our attention to the *Flora Mesoamericana* website that might be of interest to us at http://www.mobot.org/fm, where many of the fern species treated in Volume 1 of FM are illustrated with photographs and line drawings.

Her slides illustrated an area of fantastic fern diversity and she explained that epiphytes are very fussy about the availability of nutrients. One comment that gripped my attention, if I heard her correctly, was that in Peru local people firmly believe that platyceriums kill trees. However, I do not know what the evidence is for this, especially as South America boasts only one species of *Platycerium* namely *Platycerium andinum*. Altogether a most interesting and thought-provoking talk.

The third speaker was Jovita Yesilyurt, whose talk was intriguingly entitled 'Football, Carnival, Amazons ... and Ferns'. This time the spotlight fell on Brazil, or at least a small part of it. Jovita's slides illustrated some of the habitats to be found in that part of the world. Some *Doryopteris* species grow near waterfalls, but most are semi-xerophytic and grow in dry rock crevices at high altitudes. It was interesting to see large plants of *Dicksonia sellowiana* growing at quite a high altitude, which raised the question of just how hardy this particular clone might be.

Jovita is doing a revision of *Doryopteris* species for her PhD, using molecular information to try to sort out the problems of their taxonomy. She illustrated the extremely varied frond shapes, some of which are very similar to species of *Cheilanthes* and *Pellaea*, which is part of the problem.

Jovita ended on a note that struck a cord with me, namely the idea of conservation through horticulture. This is a subject that in my view needs more airing, especially with the increasing restrictions on collecting plant material in the wild.

The fourth speaker was Sylvia Martinelli, who is the driving force responsible for the Society's proposed trip to Chile in February 2002. If anyone needed any persuasion for going to Chile then Sylvia's illustrated account of her previous visits provided it. The sheer beauty of the scenery is sufficient reason to go. There were remarkable views of the tundra, though we were reminded that there are very few ferns in that habitat, their numbers increasing as one climbs higher into the temperate rain forests.

We were treated to a long succession of slides featuring such ferns as *Adiantum chilense*, *A. sulphureum*, *A. gertrudis*, *Aspenium dareoides*, *Blechnum chilense*, *B. magellanicum*, *B. penna-marina*, *Cystopteris fragilis*, *Dicranopteris* sp., *Lophosoria quadripinnata*, and several polystichums including *Polystichum mohrioides* and *P. plicatum*. Sylvia also drew our attention to the fact that the flowering plants are so colourful. She made a special mention of the local members of the Orchidaceae and the many flowering alpine treasures. If Sylvia's talk was intended as propaganda to stoke up interest in the Society's visit to Chile next year, it certainly worked with me.

This brought the morning's programme to a close and the President warmly thanked the four speakers for providing such interesting and varied topics under one central theme. During the lunch (and tea) break members could look around the Botanic Garden as well as taking advantage of the indoor exhibit and sales opportunities.

Next on the agenda was the Society's Annual General Meeting, followed by Martin Rickard's illustrated address as retiring President. These are reported elsewhere in this *Bulletin*.

On behalf of everyone present, the President thanked Graham Ackers for organising such an interesting programme, and the East Anglian Group for being excellent hosts. The following members deserve a special mention: Anne Beaufoy and Bryan Smith for directing the car parking in a very chilly wind, Tim Pyner for supervising the plant sales table, which generated £55 towards the cost of hiring the room, Rosemary Stevenson, Gill Smith and Marie Winder for supervising the provision of an enormous quantity of refreshments – including hot soup, so welcome on such a chilly day, Steve and Karen Munyard for attending with a large selection of books from the Society's Booksales, Sylvia Norton for a display of rare fern books kindly loaned from the Cory library of Cambridge University Botanic Garden, and lastly, Barrie Stevenson for organising the entire show, which we all thoroughly enjoyed.

'FERN FLORA WORLDWIDE – THREATS AND RESPONSES', GUILDFORD, SURREY – 23-26 July

Fred Rumsey

It was probably with a sense of considerable relief that BPS president Alastair Wardlaw finally opened this ambitious international meeting. Its very existence had been in doubt as foot and mouth and other factors conspired to lower attendance. In the end worries evaporated as delegates from over 30 countries were welcomed to the University campus in Guildford and were treated to a characteristically amusing introduction, in which Alastair praised ferns as the most "ecologically civilised" of plants, commenting on their modest mode of reproduction "under the gametophytic blanket". It would seem from the many examples of endangered and vulnerable pteridophytes we were to be introduced to over the next few days that this furtive activity clearly wasn't working well enough!

Having established the convivial atmosphere which was to last the duration of the conference, we were soon down to business and the keynote scene-setting address from David Given (New Zealand). He reminded us of the grim predictions as to species loss over the next decade (perhaps 40%!) and made the analogy that losing species was akin to losing irreplaceable books from a library. An influential meeting held in Missouri in 1999 had led to a global initiative for plant conservation; this had been taken forward at a meeting in Gran Canaria in 2000. As one result, the IUCN (International Union for Conservation of Nature and Natural Resources) Species Survival Commission (SSC) was developing strategic plans, and draft targets were being finalised. One way in which they wanted to raise the public and political profile of endangered organisms was the creation of 'top 50' lists for particular groups, the ferns being one. These were not necessarily to be the most threatened species but ones that exemplified particular problems or successes, and delegates were asked for nominees. This conference was, he believed, a good way for a variety of fern workers to learn more about and contribute to the developing IUCN SSC action plan for pteridophytes. Action plans, however, need action and the prospect of certain ferns becoming the passenger pigeons of the 21st century was the threat we faced, he concluded.

Clive Jermy, who had been so instrumental in pulling this meeting together, then gave us a brief history of the SSC Pteridophyte Specialist Group. This had been established following the Sydney International Botanical Congress some 20 years ago, initially as an offshoot of the IAP (International Association of Pteridologists) before being endorsed by the IUCN. He then gave a brief overview of their work before looking at this group's current aims and objectives as addressed in its developing Action Plan. This sought to identify conservation problems and solutions, to identify and support those implementing actions, to collect data to support other joint efforts such as the IUCN Red List, and to define priorities for the conservation of species, areas and habitats. Craig Hilton-Taylor then explained the Red List programme. Red Lists have proved to be very important conservation tools and are seen as credible documents by Governments, he explained. Originally these had been very *ad hoc* in their production and limited in the data they gave, but with greater knowledge and greater demands for particular information they have grown in size and complexity. The need to standardise and develop more coherently was seen as vital to maintaining the Red List system's credibility. To this end, better criteria for taxon inclusion and assessment have been drawn up, sadly too late for use in the massive 1997 Red List of Threatened Plants. Of the 33,798 species this listed, 770 were ferns and allied plants of which nine were then believed extinct. The ways in which this information could be collated and disseminated and used to create indicators of ecosystem health made for fascinating

listening. Following this theme, Adrian Phillips, representing yet another branch of the meetings co-host, the IUCN, explained the work of the World Commission on Protected Areas (WCPA) and made a plea for more linkage between fern people and those working on listing and enforcing protected areas. Since the first protected area was set aside in 1872 (Yellowstone National Park in the USA), close to 15 million km^2 now meet protected area criteria, with roughly 10% of the terrestrial environment theoretically covered; however, many of these are 'paper parks' and lack real protection. Even many of the globally recognised natural World Heritage Sites face real dangers and problems. Adrian was keen to solicit activity from the pteridological community that would generate information that could be used to strengthen protection for these sites, such as the recently listed Macaronesian laurel forests. Our fern records can make a difference in the right hands!

Liz Sheffield then bravely filled a gap in the programme at short notice by looking at a particular potential threat to British ferns: as collateral damage through the use of the herbicide Asulox to control Bracken. It would seem that *Ophioglossum* is unperturbed but if you are an *Oreopteris* next to a bracken stand and you see a helicopter with spray booms on the skyline, be very worried! The packed morning concluded with Chris Page reminding us of the importance of natural (and unnatural) disturbance for happy pteridophyte growth.

The afternoon session was devoted to regional and country reviews with many fascinating talks from places as far afield as Barbados (Louis Chinnery), Brazil (Paulo Windisch), South Tropical Africa (John Burrows), Russia (Irina Gureyeva), Argentina (Elias de la Sota), the Philippines (Julie Barcelona), the USA (James Parks (hereafter known as 'Whispering Jim' having been laid low by laryngitis, every speaker's nightmare) and New Guinea, where Bob Johns took us on a fascinating, if frenetic, tour of its unparalleled pteridophytic treasures. In the process he probably set several world records (most words spoken in 25 minutes and the longest time without a breath among them). Understandable though, when describing in such a brief time the sort of endemic species richness that this area supports. The day concluded with the poster session, which again had drawn a diverse range of people and topics from all around the world. I was particularly interested to see Yves Krippel's account of the conservation of *Hymenophyllum tunbrigense* in Luxembourg – protected, like bats in Britain, by a padlocked gate across its chosen crevice, M.A. Rodríguez' survey work on *Culcita macrocarpa* in Galicia, and Steve Waldren *et al.*'s translocation work to ensure the survival of *Gymnocarpium robertianum* in Ireland, its only site having been damaged by bulldozing and the theft of limestone pavement.

Tuesday morning brought us bang up-to-date with a session on the relevance of molecular studies to conservation. Johannes Vogel kicked off with a typically challenging talk that considered what we should be conserving on a genetic and molecular basis. This was followed by talks on particular species or genera, firstly Gregor Koslowski's detailed study of *Dryopteris cristata* in Switzerland, which looked at genetic diversity and the effects on this of past bottlenecks, i.e. reduction of populations to very low numbers. Then R. Aguraiuja looked at the six species of the Hawaiian endemic genus *Diellia* – lumped by some back into *Asplenium*. All are endangered to an extent but, given that hybrids produce good spores, their taxonomic status is in some cases still debatable. The session was concluded with a study by Chiou *et al.* on the Taiwanese endemic, *Archangiopteris somai*. The next session looked at conservation legislation and practice in the UK. Rob Cooke of English Nature set the scene by describing the legislative and policy framework,

including a description of the UK Biodiversity Action Plan process. The following three talks looked at particular organisms that are being researched under that process: *Trichomanes speciosum* (Fred Rumsey), *Woodsia ilvensis* (Phil Lusby & Adrian Dyer), *Lycopodiella inundata* and *Pilularia globulifera* (Nick Stewart). The last contribution acted as a tantalising prelude to the next day's field excursion which was intended to concentrate on these species.

The afternoon session was broadly headed 'Ex situ: ends and means' and saw Alastair Wardlaw returning several times to the fray. His final appearance, with a plea for the introduction into cultivation of a broader range of tree-fern species, eventually led him to a defence of the exploitation of tree-ferns following Rosemarie Vaulcx' review of the commercial culture in Australia of these increasingly popular horticultural subjects. Other topics covered ranged from cryopreservation as a method of conservation (Valerie Pence), to a call for an international spore storage facility from the Royal Botanic Gardens Edinburgh presented by Mary Gibby. She was to be heard later too, giving the Symposium after-dinner speech, which nicely concluded a pleasant evening at the restaurant in the grounds of the Royal Horticultural Society at Wisley.

Wednesday saw the delegates split into two coach parties to view Chobham, Thursley and Holmwood Commons – the last to see *Pilularia globulifera*, which had reappeared in quantity at Fourwents pond following dredging work and removal of the several tons of carp present! The former two sites presented the opportunity to see *Lycopodiella inundata* and to learn more about experimental habitat management for that species. Other wildlife made welcome appearances, including Dartford warblers, raft spiders, silver-studded blues and (heresy in these pages!) even some nice flowering plants (*Dianthus armeria*, *Drosera intermedia*, *Rhynchospora fusca*, etc.). Thanks should be given to the site wardens who gave up their valuable time to patiently explain their work (Andy Wragg, Mark Larther and Rob Hewer) and to Nick Stewart for organising what proved to be a very informative and necessary break from the lecture halls.

photo: R.G. Ackers

Thursley National Nature Reserve, Surrey

Les Vulcz, Martin Rickard, John & Joan Woodhams, Paulo Windisch

Next morning, however, saw us all back at our benches to hear about databasing for conservation. Jim Croft talked about initiatives in Australia, where commendably some 40% of the country's six million or so herbarium specimens are already databased. Klaus Mehltreter presented the database of Latin American ferns that he has developed with Monica Palacios-Rios but which is not yet web-accessible; this revealed that I should be heading for Venezuela if I wanted to see the centre of *Trichomanes* diversity (58 species!). Chris Humphries introduced Worldmap, a package developed at The Natural History Museum for assessing biodiversity hot-spots, complementarity, etc. and of great use to those making decisions as to site prioritisation. Finally, Craig Hilton-Taylor discussed the IUCN/SSC Species Information Service, a global resource funded by the Italian government and based in Rome.

photo: R.G. Ackers

Holmwood Common, Surrey

Nick Stewart, Tomas Sanchez, Elzbieta Zenkteler, Rob Hewer (Warden), Chaerle Peter, Liz Sheffield, Clive Jermy, Les Vulcz

The penultimate session looked at specific conservation management and assessment problems on small islands: Mauritius (Stuart Lindsay & Vishnu Bachraz), the Pitcairn Islands (Naomi Kingston) and St Helena (Antonia Eastwood). The threat to the very narrow endemic species of each of these island groups cannot be overstated; what is perhaps most surprising is that so many species have managed to persist given the problems of invasive species, habitat destruction and population growth.

Finally, following Alan Hamilton of WWF–UK's provocatively titled talk 'Is fern conservation in the Tropics possible?', which again highlighted the need for botanists to become involved and for information on work done to be made more accessible, we settled back for a brainstorming session chaired by Tom Ranker. The laudable aim of the symposium's organisers had been to develop the themes that had emerged from the sessions and to take these forward in some way. This eventually proved a little optimistic but even so I think much good came from this conference and I am certainly clearer now about the role of IUCN and its SSCs. The opportunity to meet fellow fern enthusiasts from round the world and to make new friendships and collaborations was also very valuable.

Graham Ackers, Pat Acock, Adrian Dyer, Clive Jermy, Andrew Leonard and all the others who put so much work into this symposium deserve to be thanked for providing such an interesting meeting, the theme of which was originally suggested by John Woodhams; it is just a shame that not more BPS members were able to attend.

WAKEHURST PLACE, WEST SUSSEX – 8 September — Paul Ripley

We were pleased to welcome Catherine Chatters, a new member, as well as Jo Basil, Christine Mullins and Alan Dickman to a South-East Group nucleus, making a total of 13 for this meeting on Wakehurst Place estate (51/339315). Wakehurst is jointly administered by the Royal Botanic Gardens, Kew and the National Trust.

We had the benefit of an excellent guided tour by one of the 'Wardens', Peter Edwards, who introduced us to the history of Wakehurst as well as to some of the unique trees among the very extensive collection. Worth mentioning are the chimeric hybrid between hornbeam and oak, the ash grafted onto an oak rootstock, the Plymouth pear (seized after prosecution of someone who tried to take cuttings from the only native colony) and male and female ginkgoes. Amazingly (to us as pteridologists) our guide did not share our enthusiasm for the *Dryopteris aemula* growing well on the rocks in the Himalayan Glade. Among the planted ferns we noted some good *Blechnum penna-marina* (not the smallest form), and the three osmundas: *O. regalis* (everywhere), *O. cinnamomea* and *O. claytoniana*.

After lunch we visited a wooded valley on the western edge of the estate (51/332317). We found only one *Polystichum setiferum*, but plenty *of Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris dilatata*, *D. carthusiana*, *D. filix-mas* and *D. affinis* subspp. *affinis* and *borreri* as well as a characteristically foliose *affinis* form. We have noted and reported on this in a number of previous BPS SE reports and now think it is the hybrid between *D. affinis* and *D. filix-mas*: *D.* x *complexa*. We returned along Bloomers Valley ('blooming' was the process of breaking up the sandstone to extract iron) at the foot of a chain of sandstone outcrops and saw a very fine colony of *D. aemula* growing on the rocks (51/336317).

After the obligatory tea, a small number of us visited Philpots Wood (51/348322). We noted most of the ferns reported earlier, but also a fine clump of *Polypodium interjectum*, a single but large *Polystichum setiferum* and several colonies of *Asplenium* scolopendrium. We also found a very fine stand of *Dryopteris affinis* subsp. *affinis*. This wood has changed much since our last visit prior to the 1987 storm; there is now a very dense shrub layer comprising mainly *Rhododendron ponticum* and juvenile trees. Lack of time and extremely difficult terrain prevented us from finding the *Hymenophyllum tunbrigense* previously reported, and seen recently by Patrick Acock.

AUTUMN INDOOR MEETING, NATURAL HISTORY MUSEUM, LONDON – 3 November — Graham Ackers

The idea for this meeting evolved from a previous meeting held at the Natural History Museum in the autumn of 1999. Part of that meeting was books oriented, where we had been invited to view and discuss some of the special books and prints under the trusteeship of the Museum. Thematically and practically that meeting was so successful that we felt another along similar lines could be most worthwhile. In introducing the present meeting, Jennifer Ide explained that ten members had been invited to present a book of their choice, relating why the particular book was felt to be special. Additional

books had also been brought by members and were displayed along with some notes explaining why their book(s) had been chosen.

The presentations tended to fall into two categories – those who felt that their chosen book had merit in its own right and those whose chosen book had some sentimental or personal association. Many of the accounts were highly interesting and informative, and could certainly merit separate articles – however, for the present purposes it will only be possible to provide a flavour of what was said.

Alastair Wardlaw was the first presenter, and highlighted the fact that books tended to fall into three categories – ancient and modern Floras, horticultural and encyclopaedic. He used the 'if I had to lose all but one book, which would that be' test, and the book that survived would be *The Families and Genera of Vascular Plants*, Volume 1, *Pteridophytes and Gymnosperms* edited by K.U. Kramer and P.S. Green (Springer-Verlag 1990). In being an "obsessive labeller" of his living fern collection, Alastair wished to have an authoritative source for the family of a fern. Being the only current encyclopaedic work on fern systematics, this was felt to be that source. In the subsequent interesting discussion about this book, Alison Paul pointed out that the previous work along similar lines was *Genera Filicum* by E.B. Copeland (1947), obviously now very out-of-date.

Doreen Holly had obtained a copy of *The Ferns of Great Britain and Their Allies the Club-Mosses, Pepperworts, and Horsetails* by Anne Pratt (Society for Promoting Christian Knowledge, 1855) for £10 at Hay-on-Wye. She was attracted to the book by the beautiful plates. Doreen liked the chatty style of the author, as well as the interesting descriptions of the various uses to which ferns could be put, and gave some fascinating examples. Doreen had commissioned a stained glass window using one of the plates for its design.

Steve Munyard explained that his main interest was seeing ferns in the wild, and the most useful book to help with this had been *The Ferns of Great Britain and Ireland* by C.N. Page (Cambridge University Press, 1982). The ecological and geographical information provided for each fern had enabled Steve to see in the wild the entire British fern flora, including the taxa that are quite rare. Although the clarity of the illustrations had been criticised, they were of considerable merit for identification purposes, particularly because a range of fronds was shown.

An interest in the biology and anatomy of plants led Jennifer Ide to develop a further interest in fossil plants, the subject of Jennifer's chosen book, *Fossil Plants*, (no cited author, but with photographs by E.A. Newell Arber; Gowans & Gray, *c.*1909). This slim volume was no. 21 in a Nature Books series, and sold for 6d (that's 'old pence' for younger readers!). The fossils covered are those from the Coal Measures (Carboniferous period), and so pteridophytes constituted most of the species illustrated. Several of the intriguing seed-ferns are also illustrated; these are plants whose foliage is fern-like, but they bear seeds and therefore are not ferns The quality of the photographs was such that identification of fossils in the field was possible. The book had proved of practical value in other ways in helping Jennifer put together lectures during her teaching career. However, it was also obviously a treasured possession, being frequently taken down from the bookshelves for perusal and stroking!

Patrick Acock's choice was firmly rooted in a quest to discover the first glimmerings of his interest in ferns. His father had been interested in the sciences, and through this Pat had acquired his first natural history book, that on butterflies in the Observer series. There followed a study of these insects, and the acquisition of the moths and trees

volumes in the same series. Having been aware of the ferns volume for some years from its display on sales stands, as a young man he eventually purchased *The Observer's Book of Ferns*, by W.J. Stokoe, revised by F. Rose (Frederick Warne, 1965), so beginning a lifelong interest in these plants. Patrick felt that the Society could sponsor a similar book, widely available and having popular appeal, in order to encourage a new generation of fern enthusiasts.

Howard Matthew's choice was made on the basis of local natural history connections. The book was *British Ferns and How to Identify Them* by J.H. Crabtree (*c.*1909). The book only covered 28 species, with some surprising omissions, but did convey some quite advanced conservation views of the author; in exhorting readers not to collect, he maintained that "the study of ferns is an out-door exercise, for therefrom comes new energy, health and knowledge"! However, the book's main interest lay in the identity of the previous owner, A. Jeffkins, whose details were inscribed inside the front cover. He was a local botanist who lodged his records over a 35-year period with the Ruislip Natural History Society. Howard's researches unearthed these records, some of which he presented from *Botanical Records: Part 1: Pteridophyta*, G.C. Tranter, *Journal of the Ruislip and District Natural History Society* No. 26, 1987. Jeffkins had supplied the vast majority of the records in this publication. Arthur Jeffkins had died at the age of 83 in October 1992, so must have been only 16 when he wrote that original inscription.

Unfortunately, owing to travelling difficulties, Rose Murphy was unable to present her book, so Jennifer Ide did this on her behalf. The book was *Scandinavian Ferns* by B. Øllgaard and K. Tind (Rhodos, 1993), one of the most sumptuous and beautifully illustrated fern books of recent times. To emphasise this, attention was drawn to Plates 20/21, showing in exquisite detail the several morphological aspects of *Equisetum telmateia*, including a clear depiction of the white stems so characteristic of this species. On acquiring this book, Rose had realised that books covering relatively limited geographical areas could provide greater depth of information than, say works like *Flora Europaea*.

Alan Ogden had visited Canada on a number of occasions, whenever possible taking the opportunity to see ferns in the field. On visiting southern Ontario recently, he took a guided field trip with local fern expert Nelson Maher (a printer by trade) to sites on the Bruce Peninsular. This prompted Alan to chose as his book *A Guide to the Ferns of Grey and Bruce Counties, Ontario* (Owen Sound Field Naturalists/Bruce-Grey Plant Committee, 1997; authors are not cited but the main contributor was Nelson Maher). The book is an excellent field guide, and contains most of the Canadian ferns, with the exception of a few species occurring solely on the West Coast. (As a postscript, Alan later told me that on arriving home after the meeting, he was delighted to find a parcel from Nelson Maher containing a complimentary copy of his recently published book on endangered species of the same area!)

Another contributor, Paul Ripley, was also unable to attend, owing to orchestral commitments, and so Patrick Acock presented Paul's choice, which happened to be, once again, *The Observer's Book of Ferns* by W.J. Stokoe, Frederick Warne, but the earlier edition of 1959. For a considerable period of time the book had been Paul's constant companion on holidays and walks, and with its assistance he was able to identify a good number of ferns seen. Indeed, it was only on joining the Society that his fern interest was extended beyond that provided by this book.

Barrie Stevenson explained his interest in old books and how he always made a beeline for the second-hand booksellers in any new town visited. One such visit turned up *Ferns of Great Britain* by E.J. Lowe (Nimmo, 1894). Barrie was uncertain whether or

not to make the purchase because the book appeared to be only the first volume of a six-volume series, but on persuading the bookseller to reduce the price he did buy it. Barrie's subsequent researches (with the help of earlier research by Martin Rickard) have shown this book to be extremely rare indeed, with no other copies being owned (as far as can be ascertained) by members of the Society. The intention of the publisher and Lowe had indeed been to produce six volumes, but a combination of Lowe's ill health and the publisher's budgeting miscalculations had thwarted this. By quoting snippets from and summarising correspondence between Lowe and the then secretary of the BPS, G. Whitwell, Barrie gave a fascinating account of how Lowe was evolving the book by requesting (almost demanding!) information for the book. The letters (Barrie brought one example) had negligible punctuation and an almost indecipherable hand, which had made their transcription by Barrie and Martin Rickard very onerous. Martin had anticipated the possible existence of this book in publishing an account of this correspondence in 'Notes on Fern Books of E.J. Lowe', *Pteridologist* 3(3), 1998, and readers are referred to that article for further information.

There follows a list of the other books brought, with very brief notes based on those supplied by the owner (if supplied). The list is in publication date sequence and each entry comprises title, author, publisher, publication date, book owner and notes.

Filices Britannicae, James Bolton, John Binns, Vol. 1 1785, Vol. 2 1790. Steve Munyard.

Ferny Coombes, Charlotte Chanter, Lovell Reeve, 1856. Steve Munyard.

Ferns of Wakefield, T.W. Gissing, R. Micklethwaite, 1962. Steve Munyard.

Ferns of Sidmouth, P.O. Hutchinson, J. Harvey, 1862. Steve Munyard.

Garden Ferns, W.J. Hooker, Lovell Reeve, 1862. Joy Neal. Joy was left this book by a relative who received it as a gift in 1951.

Gleanings Among the British Ferns, J.M. Patison, William Pamplin, 1863. Steve Munyard.

The Ferns of Moffat, author not given, William Muir, 1863. Steve Munyard.

The Ferns of Derbyshire, Rev. Gerard Smith, Bemrose & Sons, 1877. Steve Munyard + Brenda and Ray Smith. The book has sentimental value for the Smiths, having been given to them by author, journalist and family friend, Crichton Porteus.

British Ferns, E.J. Lowe, Swan Sommerschein (Young Collector Series), 1891. Barrie Stevenson.

Birkenhead Catalogue of Ferns, J. Ward, no publisher, May 1892. Barrie Stevenson.

British Ferns, Mrs Lankester, Gibbings & Co., 1903. Brenda Smith. The plate of *Adiantum capillus-veneris* was the illustration Brenda used for her first embroidered fern picture.

Henry Potter's Field Guide to the Hybrid Ferns of the North-East, Frank and Libby Thorne, Vermont Institute of Natural Sciences, 1989. Graham Ackers. Covers most of the North American *Dryopteris* hybrids, and is the best book for both their identification *and* the identification of the *Dryopteris* species.

Ferns for Home and Garden, no author cited, but translated by Tony Langham, Magna Books, 1995. Alan Dickman. Acquired a few years ago in a shop in Market Harborough. The book is beautifully illustrated, has a clear text, and is printed on good paper.

This idea for members to present their books worked extremely well in practice, and all present thoroughly enjoyed the meeting. The contributors are to be thanked, and thanks too to Alison Paul for arranging the excellent lecture room and common room facilities in the Department of Palaeontology of The Natural History Museum. Finally, many thanks to Jennifer Ide who conceived the idea, ably constructed the programme, and adroitly managed the contributors both before and during the meeting.

REGIONAL MEETINGS 2001

LEEDS & DISTRICT

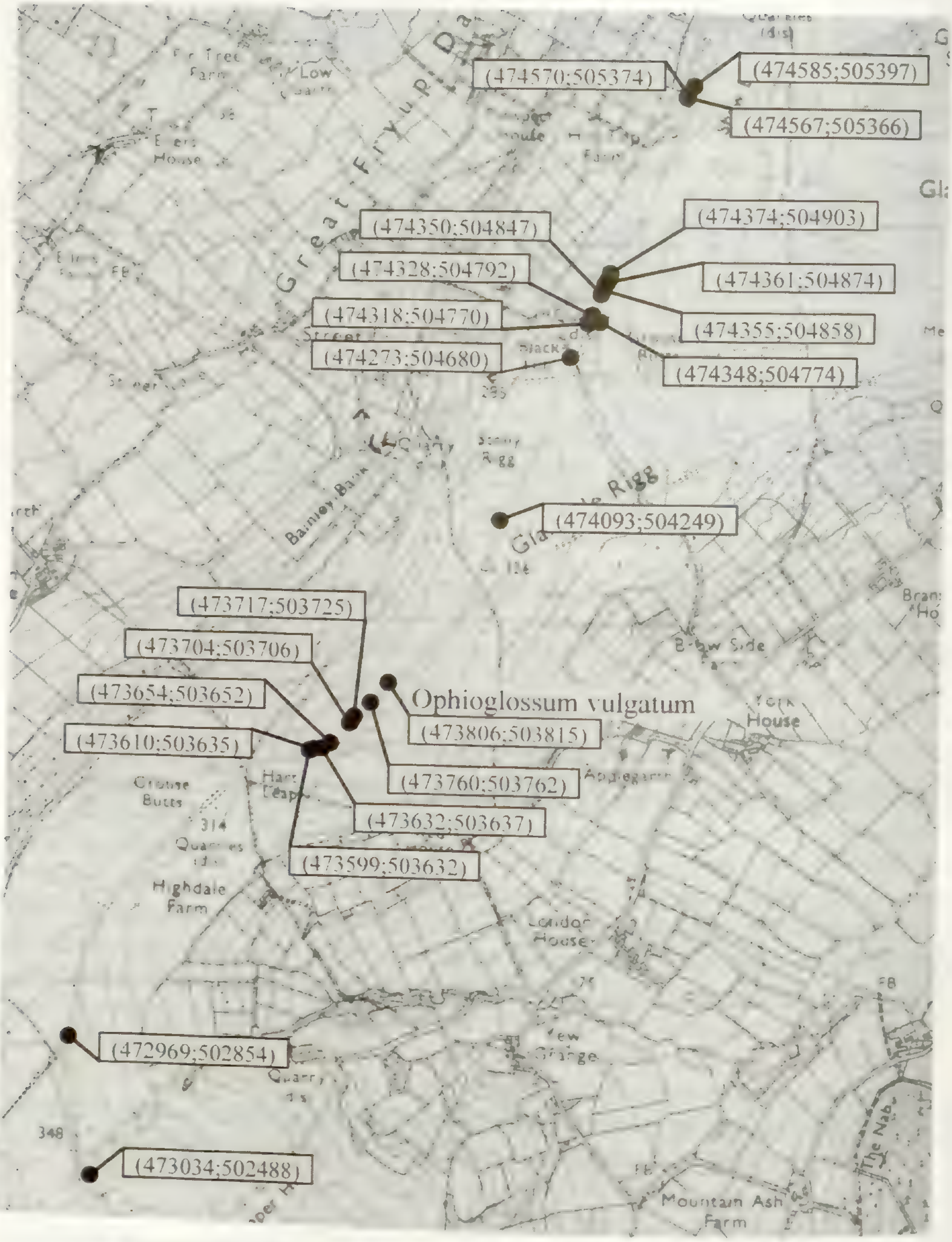
North York Moors – Moonwort Survey – 19 May — Barry Wright

Following earlier observations of the seemingly abundant *Botrychium lunaria* on roadside verges within the North York Moors, we organised a survey of several roads known to support this species in the short turf along their verges. The original observation of one of the best sites was made on 14 May 1997 when I recorded a population of more than 1,000 plants over a 70m stretch at an estimated density of 100 fronds/m². The critical time of year to do these surveys seems to be before the farmers let most of their sheep out onto the moors, which in the moors tends to be towards the end of May. These voracious herbivores soon polish off any above-ground moonwort. Having discussed with the vice-county recorder what we hoped to achieve and obtained permission from the National Park office to do the survey, three of us – Ian Oglesby, Richard Unett and myself – met at the Danby Lodge visitor centre (45/717083).

From here we moved to the main known colonies on the road between Glaisdale and Rosedale at 45/729028. This was one of the first places I noticed the abundance of moonwort on roadside verges in the moors. I parked here in 1997 whilst doing some work on heather monitoring and I was most surprised, whilst changing my shoes for wellingtons, to find myself surrounded by moonwort! This particular colony was still thriving and extended for some 50 metres from where we parked the cars.

Having studied this colony the three of us went our separate ways to explore two other likely roads, leaving Ian to continue from where we had left off. We arranged to meet up at Glaisdale for lunch and to exchange notes. This we did and found that there were no colonies of moonwort on any of the roads apart from the one we set out from. This was curious. We decided to return and make a more thorough and detailed study of this one particular road. All in all, we surveyed 2.7 kilometres of this road by walking carefully along both verges and noting down the occurrence of any significant colonies of moonwort. Each colony was assessed for the number of spikes visible and was recorded using the group's Global Positioning System (GPS) device. This is now a more reliable method for recording the precise distribution of species. During 2000 the United States military removed the fuzzy factor in the GPS satellites. This now means that, under ideal conditions, GPS devices are accurate to within approximately one or two metres. This was demonstrated when we chanced to come across a single colony of *Ophioglossum vulgatum* at 45/7380603815. I marked the position using the way marker on the GPS device and, as Ian had not seen the adder's tongue, when we caught up with him we returned to try and show him where the adder's tongue was, using the GPS. I walked back along the road until the co-ordinates matched my originals and when we looked down at the ground there was the adder's tongue no more than half a metre away from where we stood. This colony of adder's tongue was unusual in that it was on the edge of its altitudinal range, being at slightly over 300 metres.

Having obtained the accurate GPS mapping information, I was then able to superimpose this onto a 1:25,000 Ordnance Survey base plan using a Computer Aided Drawing (CAD) programme. I was pleasantly surprised to find that the plotted marks were close to the alignment of the road, confirming the accuracy that can now be achieved. These locations can be seen on the map. There was clearly a clumped distribution of moonwort colonies along this particular road.



Distribution of *Botrychium lunaria* along road on North York Moors

It was a most interesting and rewarding exercise, all the more so because we were able to do it despite the foot and mouth regulations pertaining at the time. We hope to repeat the survey next year as there are more roads to look at, and it would also be interesting to revisit this one to see if there are any changes from year to year.

Oxclose Wood and Knaresborough Castle, North Yorkshire – 21 July

Barry Wright

The Oxclose Wood meeting was a postponement from 2000 when we had intended to pair Oxclose Wood with the Yorkshire Wildlife Trust's nature reserve at Hetchell

Wood. But a preliminary recce of the latter revealed only three ferns, one of which was bracken, in the entire wood. This would not have been a fit place to take a group of pteridologists! I would have been lynched. However, Oxclose Wood was a much more rewarding place to study ferns. We were rewarded with a wealth of ferns in this relatively small wood bordering the River Wharf (44/367463). During the preliminary recce I had made some notes of the ferns but was quite surprised on our return in 2001 that we found, in addition to the abundant *Polystichum setiferum*, a few plants of *P. aculeatum*. These were growing relatively close together and the prospect of hybridisation led to much diligent searching for any possible hybrid plants. The wood was generally well populated with *Dryopteris dilatata*, *D. filix-mas*, *Pteridium aquilinum*, and a few plants of *Athyrium filix-femina* and very scarce records of *Dryopteris affinis* subsp. *borreri*. It was not generally species-rich, but abounded with ferns and had evidence of ancient woodland origins, particularly towards the southern end. This is also where the Yorkshire endemic thistle broomrape (*Orobanche reticulata*) can be found flowering in July. This is a specially protected species under the Wildlife and Countryside Act 1981.

This part of the study ended by visiting a large ancient pollarded oak tree that was four metres in girth, making it an absolute minimum of 260 years old. It was probably much older, as the process of pollarding slows down the growth rate as well as extending the lifespan of a tree.

photo: B. Wright

Knareborough Castle, North Yorkshire

Brenda Wilson, Ron Cole, Anne Wright (*foreground*), John Wilson, Richard Unett (*foreground*), Sylvia Medd, Linda Pickering, Pat Cole, Neil Timm, Alison Evans, Sylvia Martinelli.

After lunch in Knaresborough we went on to study the ferns on Knaresborough Castle. On our way we called in at a curious brick-built structure that had an almost complete coronet of ferns growing around the eaves of the flat roof (44/352586). The species colonising it were a mixture of *Dryopteris filix-mas*, *Asplenium ruta-muraria*,

A. scolopendrium and *A. trichomanes* subsp. *quadrivalens*. Although we could not study the *A. trichomanes* subsp. *quadrivalens* in any detail, it was a good testing ground for what we were to see on reaching Knaresborough Castle (44/348569). This is one of the few classic locations for *A. trichomanes* subsp. *pachyrachis* (syn. *A. csikii*); we made a thorough search around the castle walls and found abundant colonies of it, but we did not find any *A. trichomanes* subsp. *quadrivalens* anywhere on the castle wall. This was curious, as there were abundant colonies of this fern on the brick building some 150 metres further away. Exactly why subsp. *pachyrachis* should be exclusively found on the castle walls in the absence of any subsp. *quadrivalens* may remain a mystery. However, it was very pleasing to see such thriving colonies of *A. trichomanes* subsp. *pachyrachis* in their native setting.

The final part of the meeting was spent back at Tockwith where we were able to study in greater detail the subspecies of *Asplenium trichomanes*. Many years ago we had successfully raised plants of *A. trichomanes* subsp. *pachyrachis*, and also *A. trichomanes* subsp. *pachyrachis* var. *trogyense*. Fortunately these plants were now ripening their spores, and the careful use of a pair of scissors removed enough fronds to send members away with the potential for growing these attractive and unusual subspecies of our native *Asplenium trichomanes*.

The weather had been kind to us all day and the meeting ended very pleasantly with tea and biscuits on the patio and lots of discussion about ferns.

Chatsworth, North Derbyshire – 11 August **Paul Ruston**

Six friends and members met on a damp Saturday morning at Chatsworth House, the home of the Devonshires and an extremely popular venue with the public who come here to enjoy a multiplicity of offerings. We were going to explore the woodlands that rise steeply to the east of the house and gardens and then return via the lakes that lie on the plateau above. The geomorphology of the immediate and surrounding area is of steeply rising millstone grit edges, with sandstones and shales of the Coal Measures lying beneath the upland moorland plateau.

Ferns were immediately spotted growing in a stone retaining wall next to the café/stable complex and car park (43/260703). We found *Cystopteris fragilis* and *Asplenium ruta-muraria*, Neil noticed some young *Polystichum setiferum*, and a single *Dryopteris filix-mas* crowned the top of the wall. On the fringe of the woods we looked at a stone wall, party to a lock-up garage complex (43/262703), the top of which was thickly clothed in what initially was thought to be *Polypodium vulgare*, but was later determined by Barry, due to late spore development and characteristic indurated cells on the annulus, to be *P. interjectum*. Strangely, there were no other ferns occupying the wall. Following the track up into the wood several different *Dryopteris* species were noted, particularly *D. filix-mas*, *D. dilatata*, *D. affinis* subsp. *borreri* and a possible *D. affinis* subsp. *paleaceolobata*.

The hillside is crossed by numerous stone culverts and channels carrying water from the lakes above, which create a suitable habitat for ferns, particularly *Blechnum spicant* (43/264702). Continuing along the path beneath mature beech and sweet chestnut trees, we reached a large rustic-looking stone aqueduct – discharging water in romantic Arcadian splendour into a pool far below – from which, beneath the arches, *Cystopteris fragilis* could be seen taking advantage of the moist conditions. The pinnae of brittle bladder fern seen at Chatsworth appear to be less cut than those found in the limestone areas of the Peak, several miles to the north, south and west of Chatsworth. At the top

end of the water folly, when we looked down into a steep-sided ravine terminated by another waterfall, we were delighted to see many *Athyrium filix-femina* and several very strong looking *Asplenium scolopendrium*. The athyriums had long delicate fronds and it was remarked how individual plants – even in close proximity – varied in frond coloration, ruling out, surely, edaphic growing conditions as a contributing factor to this characteristic variance. From the top of the second waterfall views of the house and sections of the gardens can be enjoyed.

Moving on to the lakes (43/268700), ferns previously seen were encountered, along with *Pteridium aquilinum*. Barry spotted *Oreopteris limbosperma* close to the water's edge and a short discourse took place as to whether indeed it merited the name of lemon-scented fern – the scent is in the nose of the beholder! *Equisetum arvense* was found close by. The lakes were somewhat of a disappointment compared to their appearance on my previous visits to this very tranquil and beautiful area, due in part to an excessive insurgence along the lakes' sides of Japanese knotweed, nettles and general scrub. Volunteers required! But a tall broad-leaved helleborine (*Epipactis helleborine*) in full glorious flower did its best to make amends.

From the tower, an excellent viewpoint, we made a quick descent, well, two members did, and survived. The less energetic of us followed the track down, stopping to admire some large bracket fungi growing on an old beech tree, and a particularly good *Blechnum spicant* with many large fertile fronds, far in excess of infertile ones. We all regrouped where a fine stand of *Equisetum telmateia* (43/264705) and more very robust *Dryopteris affinis* brought to a close our ferny morning's ramble at Chatsworth.

After sampling the fodder at the stables, five of us galloped off to the Tissington Trail (43/159565) (previously the Ashbourne – Buxton rail link) upon the limestone plateau. We went primarily to look at the *Dryopteris submontana* (43/161578) previously seen during the 1997 national weekend meeting (leader Trevor Taylor), when seven individual plants were recorded at this site. Happily to say, they are all extant. All lenses were put to good use whilst an informative discourse on its general morphology took place. The steep-sided cutting is home to *Asplenium adiantum-nigrum*, *A. trichomanes* subsp. *quadrivalens* and *A. ruta-muraria*. *Dryopteris filix-mas* amid *D. affinis* subsp. *borreri* were also seen along the base of the cutting. A short walk brought us back to the cars and then two members came with me to Woodseats to view our garden and sample Eily's baking, including a fern-decorated sponge cake.

Forge Valley and Raincliffe Woods, North Yorkshire – 9 September

Barry Wright

In 1999 we paid a visit to Forge Valley with the intention that had we finished early enough we would have then progressed to Raincliffe Wood. Unfortunately we had underestimated the wealth of ferns in Forge Valley and were unable to continue on to Raincliffe Wood. As our intended meeting on this day had to be abandoned owing to foot and mouth restrictions, an executive decision was made to revisit Raincliffe Wood and continue our studies there. The weather on the day began without promise and got progressively worse, ending with a severe soaking at the end of the visit.

In Forge Valley we began where we had left off in 1999 by trying to relocate some *Polystichum* x *bicknellii* shown to us by Ken Trewren on our earlier visit (44/984870). To get there we had to wade through chest-high *Equisetum telmateia* and then had the daunting task of trying to identify without the expert knowledge of Ken whether or not

there were any hybrid polystichums on the banking. After much debate and looking at a wide variety of specimens we eventually agreed that we could not convincingly identify the hybrid among the amazing range of individual specimens. We also found good numbers of other ferns, namely *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. affinis* subsp. *borreri*, *D. dilatata* and *Asplenium scolopendrium*. However, we all enjoyed the pleasure of the search and the intellectual discussion we had.

After a light lunch in the Everley Arms Hotel we reconvened in one of the car parks associated with Raincliffe Wood (44/990890). From here we set off on what we hoped would be a reasonably large circular route – along the lower slopes of the wood, then doubling back to follow a higher track across and back down to the cars. It was not surprising that Ken had not been overly enthusiastic to drag us into Raincliffe Wood, as it seemed in parts to be exclusively dominated by *Dryopteris dilatata*. However, we were rewarded by a number of interesting finds, notably a few plants of *Polypodium vulgare* (44/994880), a single plant of *Oreopteris limbosperma* (44/994881) and several sunken lanes supporting good colonies of *Blechnum spicant* (44/994881). There were also the usual *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. affinis* subsp. *borreri*, *Pteridium aquilinum* and a single small colony of *Equisetum telmateia*. A very pleasant walk, but not one to write home about regarding the fern flora. The slight disappointment of the lack of interesting ferns, combined with the ever-increasing downpour of rain meant that we ended the day at about three in the afternoon.

Footnote

On returning home I remembered that on the previous occasion, when expertly guided by Ken Trewren, I had collected pinnae from *Polystichum* x *bicknellii* and both its parents and had scanned them into my computer. I was then able to confirm to the members who attended this meeting – by e-mailing a copy of the scans – that we in fact had not seen the hybrid at all. The hybrid plants were considerably larger than either of the two parents and there were numerous differences in the characteristics of the pinnae and pinnules. Better luck next time, or make sure Ken is with us in future.

A damp end to our meetings, but we were fortunate to have been able to complete four out of the five scheduled events, albeit with this last one being at a different venue. Many thanks to all who joined in this year to make these meetings so much fun and so rewarding.

SOUTH-EAST

The Palm Centre, Ham, and Royal Botanic Gardens, Kew, Surrey – 10 February

Pat Acock

Stefan knows where. If there are plants to be found in splendid quantities and settings in London, Stefan Czeladzinski knows where they are.

Once again Stefan had offered to take the South-East Group out early in the season, and despite quite a cold day we were given a breath of the tropics. About ten of us met up at The Palm Centre next to Ham House on the River Thames. We were taken around the outside show gardens where we were delighted to see the large number of species of bamboo and palms that are really hardy. Stefan is of the opinion that palms in particular make a wonderful backdrop for ferns. Sheltered by a Georgian kitchen garden wall were a large number of *Dicksonia antarctica*. Most of the foliage and some early reckless croziers had been severely damaged by the frost but we were reassured that new fronds would soon replenish the damaged ones once the new season arrived.

We then went into the main complex of greenhouses, to be greeted by an enormous stand of *Cyathea medullaris*, the remains of their large black stipes forming an impenetrable forest. Other joys included a number of ferns that we had seen in New Zealand and a large range of immature tree-ferns, as well as a whole range of cycads.

After about an hour, when most of the party had splashed out on a few plants from the nursery, we met the owner, Martin Gibbons, who explained how he had first started with palms. Through a good-humoured chat and questions and answers session he gave us a potted history of the place and how his love of palms had started. He exchanges journals with our president, Alastair Wardlaw, who has visited the nursery. Martin told us that we had possibly visited at the worst time of the year – most of last year's stock had been sold and he was waiting for the new stock to arrive in great quantity.

After lunch on Kew Green, Stefan marched us in past the RBG Kew gate-house and we did a tour commencing with the Lower Nurseries. Many of the group had not seen the area since it had been redeveloped and were surprised at the size and cleanliness of the place. We spent a happy hour looking at the many ferns, some grown in large numbers for more effect when planted out in the various houses. We were disappointed to see how few of the research collections were left. From here we went on to the Princess of Wales Conservatory where some of the gaps in the fern section had been filled. From here we fought the fading winter light with a quick visit to the Alpine House and then on to the Filmy Fern House which Stefan informed us was to be demolished in the near future. Perhaps the membership may be allowed to find a new home for the many *Dicksonia antarctica* sporelings that no doubt will be cast aside on demolition.

After thanking Stefan kindly for having suggested another way to lift those winter blues, we made our various ways home, poor Stefan in the pouring rain on his bicycle.

Borde Hill Gardens and Nick Schroder's Garden, Haywards Heath, West Sussex – 19 May

Paul Ripley

Eleven members of the South-East group, including Jack Hubert, who we were pleased to welcome for the first time, met at Borde Hill, just outside Haywards Heath (51/323266). This large, privately-owned garden has a pleasing variety, a refreshing absence of the labour-saving techniques so common in large gardens these days, and a fine position. Its specialities are rhododendrons and azaleas, and there were some magnificent and unusual specimens. Fern interest was limited to the usual *Onoclea sensibilis* and *Matteuccia struthiopteris* (var. *pensylvanica* I think), but we were pleased to see *Polystichum setiferum*, *Dryopteris carthusiana* and *D. affinis* subsp. *borreri* growing as reminders of the original woodland.

After a visit to the well-stocked garden centre and an excellent lunch, we moved on to the garden of Nick and Sally Schroder in Haywards Heath itself. The house and garden are relatively new, but there is clear evidence of the woodland in which the houses were built, and a pleasant stream passes through the front of the garden. Nick holds the National Collection of *Athyrium*. They are planted on the steep and terraced banks of the stream and in a shaded area behind the house. These ferns were magnificent. Cognoscenti could not fail to be impressed by the quality and purity of the varieties Nick has grown. Here, for example, is the original 'Victoriae' and I was particularly impressed by a beautiful 'Gemmatum' (*Athyrium filix-femina* 'Gemmatum Barnes'), almost edible in its crisp greenness. Mention should also be made of a fine 'Vernoniae' and also one or two lovely *Polystichum* varieties, including of course *P. setiferum*

'Perserratum Schroder' and *P.s.* 'Multilobum Schroder'. Nick told me that although far from fully developed at the time of our visit, they had attained their customary large size.

We are most grateful to Nick and Sally for opening their lovely garden to us and for their hospitality, including a welcome tea.

Paul Spracklin's Oasis & Gerry Downey's Garden, Essex – 8 July Pat Acock

In a spirit of comradeship we decided to have a joint meeting with the East Anglian Group this year, as many of us tend to cross the great divide (the River Thames for the uninitiated!) to increase the number of field trips we do each year.

I just know that I shall not be able to do justice to these two most wonderful and very different gardens.

In the morning we were welcomed by Paul Spracklin to his home in South Benfleet, from where he runs a small nursery, Oasis. Paul explained that he had moved into the house a few years previously and had spent time renovating the house before moving on to the garden. A small front garden led around to an amazing back garden overlooking the Thames. Paul had brought in mechanical diggers and completely re-landscaped the garden, putting in terraces and a large lake. Connected to this were side ponds, and a cave and rock feature made from ash waste from the local power station.

photo: courtesy B. Smith

Combined South-East and East Anglian Regional Groups' visit to Oasis Nursery

Above: Barrie Stevenson, Jack Hubert, Steve Andrews, Mick & Linda Craddock, Tim Pyner, Mary Hilton, Bryan & Gill Smith, Sylvia Norton, Rosemary Stevenson
Below: Paul Ripley, Steve & Karen Munyard, Patrick Acock, Geoffrey & Marie Winder

Then came the plants. Paul had always been interested in unusual plants, especially those of deserts. He has tried to grow many of these in the garden and has rarely lost them. He especially likes palms, cacti and bamboos. The many niches he had created provided many places where a large variety of pteridophytes would feel at home. There were spleenworts in the rocky area, tree-ferns overhanging the lake, horsetails in the boggy parts of the lake and pond interfaces, and among all the dense damp foliage were the terrestrial ferns. All in all a superb way of setting off ferns in a garden that was always full of surprises.

After lunch on the front at Frinton-on-Sea (five miles north-east of Clacton-on-Sea), we found our host, Gerry Downey, anxiously awaiting our arrival. In the front of Gerry's house was an L-shaped plot, which he had laid out in a minimalist Japanese style, with beds of raked stone, occasional rocks and low walls. Although there were other plants, there were some really choice varieties of small and medium-sized ferns. Once again the carefully chosen background really enhanced the ferns' features. Being an old Victorian town, Gerry has been able to obtain some of the (discarded) background materials which our forebears used to such effect but which are generally difficult to obtain these days. In one corner was a small piece of brain coral over which fronds of lady ferns drooped majestically.

The back garden was really long, and wider than the front garden. The first part consisted of a formal lawn, once covered with *Ophioglossum vulgatum* that had to be sacrificed to produce a short-turfed conventional lawn. Down one side and across the bottom of this formal garden was an array of large and small ferns, many of which had been given by Christopher Fraser-Jenkins.

Behind a screen were a number of long greenhouses and frames, and a number of fern features such as a rockery and pond with boggy area for specialist ferns. There was an alpine house full of interesting plants, including many fern gems such as *Asplenium* x *costei*, *Cheilanthes* and *Pteris*. In the other long greenhouse Gerry had large numbers of ferns at various stages of their life-cycle. What he had not grown from spores he had swapped with other growers or supplemented by buying in from nurseries. In baskets he grew ferns such as *Asplenium flabellifolium*, pyrrosias and davallias. Within this house there were also closed frames for filmy ferns, a feature that Bert Bruty used at Kew to great effect for these difficult plants.

Gerry has had nearly all the British species growing at one time or another and most of them were to be seen around the long greenhouse or growing in pots on the raised staging along the back of the garden. Parallel to the long greenhouse was a similar length of cold frames. In these Gerry raised and hardened off his smaller plants, and scores of plants were to be seen at various stages of development.

We were grateful to Gerry for the number of plants he kindly parted with and also to his wife who furnished us with refreshments at the close of a busy day. Do try to visit both of these amazing collections of plants if you have the chance.

Marley Common, Surrey, and Petworth and Bognor Regis, West Sussex – 13 October

Stephen Munyard

Seven members met at the National Trust car park at Marley Common (41/891307) near Haslemere to explore the wooded hillside to the west. We descended the steep slope to a damp area where six species of fern were growing: *Pteridium aquilinum*, *Dryopteris dilatata*, *D. carthusiana*, *D. affinis* subspp. *borreri* and *affinis* and *D. filix-mas*. Further

down the hill there was a small pond with *Athyrium filix-femina* at its edge. Along a track to the west *Blechnum spicant* was seen growing in profusion. Heading back to the cars a few mature plants of *Oreopteris limbosperma* were seen beside the track.

After a break for lunch we travelled south and examined the walls of Petworth Park (41/967216). Typical wall ferns were seen: *Asplenium adiantum-nigrum*, *A. ruta-muraria*, *A. trichomanes* subsp. *quadrivalens* and *Polypodium interjectum*.

The party then drove in convoy to Tim Brock's garden in Bognor Regis. The high-walled garden is 50% shaded, which along with its pools and moving water gives it a relaxed atmosphere. The humidity is high, so conditions are ideal for Tim to grow his amazing collection of *Asplenium scolopendrium* cultivars. There are a number of aspleniums in a raised bed by the house, which has a thriving *Dicksonia antarctica* as a centre-piece.

We then adjourned to the house for refreshments and a chance to examine Tim's collection of books. This was an enjoyable final South-East meeting of the year.

EAST ANGLIA

Indoor Meeting, Little Thurlow, Suffolk – 28 January — Tim Pyner

For our annual winter meeting at Mary Hilton's delightful home, 16 Members and friends had the pleasure of hearing talks from two eminent BPS members, Josephine Camus and Jennifer Ide.

Josephine began her talk on ferns of South-East Asia by elucidating the Malesian floristic region. Within this area Borneo is the largest island and floras of three different origins occur: mainland Asian, Japanese and Australian. This, together with the varied topography and location on the Equator, produces a flora of rich diversity. We then heard how the vegetation changes with increasing altitude on Mount Kinabalu.

The talk was illustrated with superb slides throughout. Tropical ferns started to feature, most being unknown to the group. Tree-ferns, *Cyathea* and *Cibotium*, are found frequently, along with the various species of *Blechnum*, *Diplazium* and *Gleichenia*. Thelypterid ferns occur, some with their unfurling croziers enveloped in thick mucilage and, to enable the frond to breathe, aerophores on the stipes poke through this coating. Six hundred and eight pteridophytes have been recorded from Kinabalu National Park of which 40% are epiphytic. We were shown a selection of these, including *Teratophyllum aculeatum*, a climbing fern with three distinctly differing growth stages, and *Lecanopteris* which has a swollen rhizome that is colonised by ants.

Josephine visited the local markets and found two ferns with edible croziers on sale. These were *Diplazium esculentum* and *Stenochlaena palustris* and were collected from the wild. We then had the techniques and problems of collecting herbarium specimens in the tropics explained to us.

Josephine next told us about the group of ferns in which she specialises, the *Marattiales*. This is an ancient group with a long fossil record comprising four extant genera: *Marattia*, *Angiopteris*, *Christensenia* and *Danaea*. She is carrying out studies on various characteristics such as stem sections, scales, sporangia, spores and stomata, which are helping to classify these fascinating ferns.

Jennifer spoke about the BPS meeting in New Zealand. We saw a selection of slides from the whole trip, which started at Christchurch in South Island and gradually moved northwards finishing at Auckland in North Island.

The group managed to see two-thirds of New Zealand's marvellous fern flora. Highlights included *Cyathea smithii* and *Dicksonia squarrosa* in the Minnehaha forest, coated abundantly with filmy ferns, while in the coastal forest at Punakaiki *Phymatosorus scandens*, *P. diversifolius*, *Asplenium bulbiferum*, *A. polyodon* and *A. obtusatum* were found. The Queen's Park Gardens in Nelson have an area dedicated to native ferns, planted by members of the Nelson Fern Society, which is now maturing. The photos showed what an outstanding feature a well stocked fern garden can be. *Cyathea smithii*, *Dicksonia fibrosa* and *Botrychium biforme* were seen at Lake Rotopounamu. The forest at Whangarei revealed *Schizaea dichotoma*, *Sticherus flabellatus*, *Blechnum fraseri*, *Lindsaea trichomanoides* and *Lygodium articulatum*. The wonderful Kauri *(Agathis australis)* Forest at Waipoua harbours a large selection of fascinating ferns including *Dicksonia lanata*, *Loxsoma cunninghamii*, *Blechnum filiforme*, *Asplenium flaccidum*, *Tmesipteris elongata* and *Gleichenia dicarpa.* All these ferns and many more were illustrated with superb photographs.

Both Josephine and Jennifer provided wonderful talks and pictures of places and ferns that most of us only dream about, and both were warmly thanked for their efforts.

The afternoon was completed with the usual high quality refreshments provided by various group members.

Framlingham Castle, Lady's Mantle Meadow and Anne Beaufoy's Garden, Ipswich, Suffolk – 17 June

Sylvia Norton

Fourteen Members of the East Anglian Group met at the car park of Framlingham Castle (62/286635), where men were struggling into chain mail for the day's 'Re-enactment' scene. We battled against a very strong wind towards the north wall of the Prison Tower, where we were rewarded with many large specimens of *Asplenium scolopendrium* growing happily in the crevices in the angles of the wall, with *A. adiantum-nigrum* and *Dryopteris filix-mas* in the nooks and crannies among the moss covered stones. Further along the walls of what was possibly the remains of a staircase were several aspleniums: *A. scolopendrium* again and also *A. trichomanes* subsp. *quadrivalens* and *A. ruta-muraria* tucked into the merest cracks and given shelter by long grass and branches of elder. We followed the Mere around the outside walls of the castle before driving on to Lady's Mantle Meadow (a site administered by Suffolk Wildlife Trust) near the village of Cransford to the north-east of Framlingham (62/324638).

This is a lovely meadow, such a rarity nowadays, with a stream and marshy area through the middle of a lush growth of native species. As we expected given the meadow's name, *Alchemilla filicaulis* subsp. *vestita* was there in abundance, but what a wealth of other species too. Known to be in this meadow were *Ophioglossum vulgatum* (adder's tongue) and *Botrychium lunaria* (moonwort), although they had not been seen recently. However, sharp-eyed enthusiasts in our group found several plants of each of these delightful ferns in the damp areas they love, which was very rewarding. Even BPS members are aware of other plants and it would be difficult not to appreciate the twayblade, common spotted and southern marsh orchids and impossible to miss the golden yellow of the buttercups, yellow rattle, lotus, creeping Jenny and (my particular favourite) meadow vetchling. Tim Pyner listed 61 different species of plants. The farmer had delayed putting cattle in to graze until after our visit, so we were able to enjoy this rare site while being serenaded by a chiffchaff, the air perfumed with hawthorn, elder and meadowsweet.

After a picnic lunch we went on to Anne Beaufoy's home in Ipswich. In a pleasant suburban road, the front garden was richly planted but gave no indication of what we should find at the back, and here was a mini-world. In the space of about 70 yards Anne's garden rises sharply, by twisting paths and steps, to the height of the roof. The whole area was densely planted and with such a variety of habitats. Built into this south-facing slope of glacial outwash gravel were terraces, each with a pond and with acid and alkaline areas. Growing happily with all the other plants in the acid areas were *Oreopteris limbosperma*, *Osmunda regalis*, *Blechnum penna-marina*, *Phegopteris connectilis* and *Dryopteris aemula*. *Polystichum setiferum*, *P. proliferum*, *Polypodium vulgare*, *Thelypteris palustris*, *Gymnocarpium dryopteris*, *G. robertianum*, *Matteuccia struthiopteris*, *Asplenium scolopendrium* and *Athyrium filix-femina* thrived in the neutral to lime section. *Adiantum aleuticum* and *Cystopteris fragilis* enjoyed the shelter of the enclosing walls. Anne also has potting and propagating sheds, as well as greenhouses where *Woodwardia* and *Dicksonia* were to be found; a masterpiece in this small space.

This stimulating and surprising garden was the high point of an agreeable and memorable day. We relished an excellent tea while we discussed what we had seen. Sincere thanks to Anne Beaufoy and Barrie for such an enjoyable day.

Waddesdon Manor, Buckinghamshire – 15 July **Bryan Smith**

On Sunday 15th July thirteen BPS Members visited Waddesdon Manor (42/740169). However, this short, bland statement does nothing to convey the enjoyment we experienced that day. Waddesdon, near Aylesbury, is well outside what you would call East Anglia, and for several of us this meant an overnight stay beforehand. But it was worth the journey. Our guide was Gardens Manager, Michael Walker, who we quickly warmed to when he gave us all free glossy guides to the gardens. You expect Gardens Managers (or Head Gardeners as they used to be called) to be well on in age, wizened by years of tending the soil. But not so in Michael's case; his youthful appearance belied a wealth of knowledge and enthusiasm.

This vast Rothschild estate, now administered by the National Trust, began life on an undeveloped hill in 1875. Much of the earlier design of the gardens was based on William Paul's idea of blocks of coloured trees and bushes – what Michael called the B&Q approach to gardening. We started our tour in the car park and headed for the newly restored Stables complex, which is used as a restaurant and accommodation block for volunteers and students, including several from overseas. In fact, although a small core of gardeners tends the grounds, the estate relies on several voluntary partnerships with organisations such as 'Crash Victim Recuperation'. The armed forces are also used, and Michael recounted how he had 110 RAF volunteers in full combat gear dead-heading geraniums (a pity nobody had a camera). We hadn't expected an assignment, but Michael was soon asking us our views on converting an undeveloped area by the Stables into banks of ferns.

Moving on from here we passed numerous plantings of *Polystichum setiferum* 'Plumosum Bevis' and a recently restored Victorian ice-house (which looked remarkably like an electricity sub-station) to reach the Grottoes. This part of Mrs James' Garden was our first encounter with the estate's outcrops of Pulham stone. This remarkable material, dating from the 1880s, comprises man-made boulders fashioned out of crushed rock and cement moulded around brick and clinker. The process was developed by James Pulham of Broxbourne, and such was his skill in achieving realism that strata were etched into the rock and even real fossils were incorporated to fool

eminent geologists of the time. The Grottoes are essentially a pile of the leftover rock, but they have recently been developed with plantings of a variety of species of *Dryopteris*, *Polystichum* and *Cyrtomium*, and *Athyrium filix-femina* cultivars.

Our next port of call was along a lake in front of the Dairy, a building representing a large Japanese home with two ornate jetties. 'Cliffs' of Pulham stone again backed the walk and the area abounded in varieties of *Polystichum*, *Osmunda* and *Dryopteris* as well as *Polypodium cambricum* and *Asplenium scolopendrium*. The lake itself, with its colourful blue-beaked ducks, has had to recover from an incident three years ago when workmen removing a redundant heating-oil tank emptied the contents into the nearest drain. Unfortunately the drain connected to the lake via underground water storage tanks and the effect was only noticed when the ducks in the lake started sinking.

From the lake we moved into the Water Garden, an area not normally open to the public. Here was the most impressive of the Pulham stone features with the 'Devil's Bridge' arch and a large pond. The whole area has recently been restored under the direction of Julian and Isobel Bannerman, who are renowned for their work at Highgrove (including the Fern Stumpery). The Water Garden area is full of ferns, particularly *Dryopteris* species and *Asplenium scolopendrium* (including crested varieties).

After seeing the Water Garden we made our way back to the main house to see the Parterres. This year these formal beds have been designed by Oscar de la Renta with a rainbow colour theme. The artist's original designs were transferred to computer and each pixel of the electronic pictures then represented a single plant. Fifty thousand bedding plants (mainly succulents) were used to create the two parterres, and even odd-coloured pixels produced by the computer graphics were faithfully reproduced with plants. The designs have not been without controversy, many visitors hoping to see the traditional beds of red geraniums. We also learnt that Waddesdon gardens are annually planted with 200,000 plants.

At the end of our very full Sunday morning we bade farewell to Michael (and his dog, which had accompanied us throughout) and thanked him for a truly remarkable visit and for freely giving us his time. Our gift of member-raised ferns (transferred to the boot of Michael's car at the start of our visit) will, we hope, inject a little bit of East Anglia into the Waddesdon garden.

Some of us stayed on into the afternoon to visit the Renaissance style chateau and Rothschild wine cellars (which is another story in itself) and to explore the rest of the grounds. A small cutting beneath the 'Tay Bridge' revealed *Dicksonia antarctica*, *Adiantum pedatum* and *Asplenium scolopendrium*, while the aviary area contained *Dryopteris wallichiana* and a number of unrecognised tender ferns set against an enclosed rock face. We even found some wild orchids in the Wildflower Valley below the Summerhouse. Finally, a few members managed to squeeze in a visit to the Plant Centre before heading home with laden boots (or do I mean leaden boots?).

Beeston Common and Felbrigg Hall, near Sheringham, Norfolk – 16 September

Geoffrey & Marie Winder

On a rather dull Sunday morning, about a dozen members and friends met at the entrance to Beeston Common (63/165426) where we were introduced to Ken Durrant, our guide for the morning. In his eighties and a keen naturalist, Ken's knowledge of the common and its flora and fauna is second to none. The 25 hectare (62 acre) common is an SSSI situated inland from Sheringham on the Norfolk coast and has never been

cultivated. The soils are variable, made up of stones, gravel, sand and clays deposited on the underlying chalk by glaciers during the last ice-age. The site is crossed by several streams, which tend to be calcareous as they are fed by springs from the underlying chalk. To maintain a diversity of habitats in the present-day absence of grazing and furze (gorse) cutting, the natural succession to woodland has to be checked by judicious cutting and, in some areas of bracken, the use of herbicide. This range of habitats, from *Phragmites*-dominated marsh to typical heath, has resulted in a very rich flora. Flowering plants were too numerous to list in detail here; however, we were surprised by the amount of grass of Parnassus, *Parnassia palustris*, flowering profusely in the moister grassy areas, and by the large numbers of orchid seed heads. In what must be an acidic area low in nutrients we were shown healthy groups of the sundews *Drosera rotundifolia* and *D. anglica* growing in close proximity. Another insectivorous plant, the butterwort, *Pinguicula vulgaris*, grew a short distance away.

The most widespread fern was *Dryopteris dilatata*, usually occurring singly or in small groups. In one area *D. carthusiana*, *D. cristata*, *D. dilatata* and *Thelypteris palustris* grew within a few metres of each other. Not very far away we were shown the dried-up foliage of an *Osmunda regalis* which had been trimmed accidentally in the cutting operations mentioned earlier. Near a pond we found a few *Dryopteris filix-mas*. Patches of bracken, *Pteridium aquilinum*, grew in some of the drier, acidic parts of the common and it was these which we understand had been treated with herbicide. A few horsetails, probably all *Equisetum arvense*, also grew here and there.

At lunch-time we drove a few miles further inland to Felbrigg Hall (63/193394) which, with its estate, is a National Trust property. Here, Mary Ghullam, one of our members who lives locally and had organised the day for us, came into her element as she is a voluntary helper on the estate and knows it very well. She took us to an area of woodland known as the Lion's Mouth, which is situated on higher ground and again comprises ancient glacial moraine. Most of the trees were beech, some pollarded in the more distant past. The ferns included bracken, *Dryopteris filix-mas* and *D. dilatata* – some of the *D. dilatata* were growing on rotting wood or epiphytically in the clefts formed by the branches and trunks of the beeches. On the banks of a drainage gully, close to the road and cleared annually by the council, was a small but thriving population of *Blechnum spicant* together with a few *Athyrium filix-femina* and *D. dilatata*. Other interesting plants included the moss *Plagiothecium cavifolium* growing in its only known lowland site in Britain. Fungi were plentiful at this time of year and included fine specimens of death cap and amethyst deceiver. We returned to the West Garden, which is near the house. Behind the Orangery grows a patch of *Selaginella kraussiana*, a plant not present within the Orangery today. This unheated building houses camellias, below which grow some fine *Woodwardia* sp. and several *Polystichum setiferum* with bulbils and plantlets along the fronds. On the face of the ha-ha wall we found *Asplenium adiantum-nigrum* and *A. ruta-muraria*, the latter mainly on an older part of the wall constructed of flints set in mortar. There were also a few *A. scolopendrium*. On the Hall itself, *Polypodium interjectum* occurred on a parapet and a chimney.

We were taken inside the house to look at sheets from a recently found 18th-19th-century herbarium (the oldest sheet was dated 1770). Ferns represented included *Osmunda regalis*, *Polypodium vulgare*, *Aspidium* (*sic*) *filix-femina* [*Athyrium*], *Ophioglossum vulgatum*, *Hymenophyllum tunbrigense*, *Pteris* (*sic*) *crispa* [*Cryptogramma*] and *Equisetum sylvaticum*. The herbarium seems to be part of the preparations for a book and associated with a Rev. G.R. Leathes of Saxham.

BRITISH PTERIDOLOGICAL SOCIETY

MEMBERSHIP LIST

December 2001

NOTE

Please remember to notify the Membership Secretary of any changes of address.

Amendments to this list will be published in future issues of the *Bulletin*.

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H *denotes Honorary Member;* * *new member for 2001* ** *new member for 2002*

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Most of us completed a busy and very interesting day by visiting the attractive walled garden with its National Collection of *Colchicum*, some in flower.

End of Season Meeting, Barrow, Suffolk – 28 October **Barrie Stevenson**

At the time of writing we look forward to our annual Autumn Meeting at the house of Marie and Geoffrey Winder, whose garden is a joy to behold at this time of year.

Growing in the shade of a tall *Eucalyptus gunnii* and a splendid specimen of *Ginkgo biloba* is a choice collection of ferns, including established plants of *Polystichum setiferum* 'Plumoso-divisilobum', *Polypodium cambricum*, *Dryopteris cristata* and two young specimens of *Dicksonia antarctica.* Around the margins of the pond will be found *Osmunda regalis*, *Thelypteris palustris* and *Equisetum scirpoides.*

Further specimens of young ferns, grown from spores, occupy two greenhouses and several cold frames, while another greenhouse shelters a vast collection of *Cyclamen*, including examples of *C. africanum*, *C. intaminatum* and *C. purpurascens*, the last of which fills the air with a delicious perfume. Also of note will be the blooms of various *Colchicum* and Autumn Crocus and probably the earliest of Marie's collection of Snowdrops, *Galanthus reginae-olgae.*

Our indoor gathering will include a display of photographs, slides and a video, all with pteridological content, and a selection of ferny artefacts. This popular meeting continues with the consumption of superb refreshments, a fitting conclusion to a successful year.

NORTH-WEST

Pennybridge, Cumbria – 9 June **Jack Garstang**

Sixteen members met at Overbeck, our home in Pennybridge (34/314827). The plan for the day was to follow a circular route – through the village into the woods on the eastern side of the valley, then on to Fieldhome, a small estate with 300 yards of river frontage and finally to return home for a garden visit.

On our walk through the village we found several colonies of *Asplenium ceterach*, *A. ruta-muraria*, and the calcicolous *A. trichomanes* subsp. *quadrivalens.* By the front door of Fern Cottage was a superb specimen of *Polystichum setiferum* 'Divisilobum' (present for nearly 40 years to my memory). Over the river, the densely wooded slopes of the Crake Valley hold an extensive ground cover of woodland ferns, mainly *Dryopteris filix-mas*, *D. affinis* subspp. *affinis* and *cambrensis*, *D. dilatata*, *Athyrium filix-femina* and cascades of *Blechnum spïcant*. Quite a few of the *Dryopteris* showed examples of a rogue gene, having bifid and polydactylic fronds. Lunch was taken at Fieldhome, once the house of the owners of the nearby Sparkbridge bobbinmills. The garden had the usual wall ferns and some nice *Asplenium scolopendrium*. There were also large plants of *Dryopteris filix-mas* with long ancient rhizomes lying horizontal on the ground. However, the river frontage (with its *D. affinis* subsp. *borreri*) and the fields were closed under foot and mouth restrictions. The walls on the way back to Pennybridge gave us two separate colonies of *Asplenium adiantum-nigrum* and masses of *A. trichomanes* and *Polypodium interjectum*.

Ours is a small sheltered garden of about a quarter of an acre containing nearly 100 species and varieties of ferns. Some more unusual ones include *Athyrium filix-femina* 'Glomeratum', 'Prichardii', 'Victoriae' and 'Plumosum Druery' (sporeling), *Dryopteris*

remota, *D. affinis* 'Grandiceps Askew', *D. filix-mas* 'Barnesii', *D. sieboldii*, *Asplenium scolopendrium* 'Corkscrew' and 'Angustato-marginatum', *Dicksonia antarctica*, *D. squarrosa*, *D. sellowiana* (Bolivia – Eric Baker), *Cyathea smithii*, *C. cooperi*, *Woodsia ilvensis*, *Thelypteris palustris*, and my favourite, mother shield fern from New Zealand (*Polystichum proliferum*) with one large and two small ferns growing from a single one foot-high trunk and reputed to be 80 years old.

Marjorie served a delicious home-made afternoon tea, bringing to a close a good first meet of the season, with many members chatting and showing some reluctance to go home.

Arnside, Cumbria – 7 July **Frances Haigh**

On a very hot, sultry day 21 members met on Arnside Promenade (34/454786) and started by walking through Ashmeadows Woodlands, a large and somewhat neglected old garden. Here we were pleased to find a variety of old cultivars, with forked and crested specimens of *Asplenium scolopendrium*, *Dryopteris filix-mas* and *Polypodium*, and a particularly fine, sterile, lace-like variety of *Polystichum setiferum* that was considered to be at least 100 years old. Naturally occurring native ferns seen were *Asplenium scolopendrium*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. dilatata* and *Polystichum aculeatum*.

Dropping back to the shore and refreshing ourselves with ice-cream, we stopped to view the *Adiantum capillus-veneris* growing in a damp, tufa-covered section of the limestone cliff. This was doing well, spreading along a crack with several smaller plants nearby; a little further west were more specimens, again in damp tufa.

Next came Beachwood, a small local reserve. Much of this is now heavily overgrown, so despite previous records of 13 ferns, we only managed to find *Dryopteris filix-mas*, *D. dilatata*, *Polystichum aculeatum*, *Asplenium scolopendrium* and *A. adiantum-nigrum* in the wooded area, with *A. ruta-muraria* and *A. trichomanes* subsp. *quadrivalens* on the sea-wall. Here our attention was diverted by the coastguard's siren and we watched the (admittedly rather small) bore sweep up the estuary on the rising tide. We continued westwards along the shore to examine a small fern recently found in a crevice of the very low limestone cliff. Hopes of having a specimen of *Asplenium marinum* (present on the opposite side of Morecambe Bay) were dashed by experienced members who declared it to be a young *A. adiantum-nigrum*.

After lunch was a visit to land that had a variety of habitats including a damp peaty area around a pond, limestone grassland, woodland and rocks. The main attraction here was the large tall stand of *Thelypteris palustris*, with smaller plants round about. Nearby was *Equisetum palustre* with *E. arvense* on the bankside. Foot and mouth restrictions prevented a full exploration but the usual ferns of the district, *Asplenium scolopendrium*, *A. trichomanes* subsp. *quadrivalens*, *Dryopteris filix-mas*, *D. dilatata*, *Athyrium filix-femina* and *Polystichum aculeatum* were noted.

Finally, during refreshment outside a local pub, the heat wave suddenly broke with a sharp thunder-shower and we went our separate ways.

Dawyck Botanic Garden, Stobo, Peeblesshire – 25 August
(Leader: Heather McHaffie) **Jack Garstang**

Twelve members of the North-West Group and several Scottish Group members met at Dawyck, south-west of Peebles in the upper Tweed Valley (36/1635), and were greeted by David Knott, the curator of the Garden. He outlined the Garden's 300 years of plant

history and the more recent developments since it was gifted to the nation and came under the care of the Royal Botanic Garden Edinburgh in 1978. The 60-acre garden, rising on a steep hillside to an elevation of 850 feet, has shallow, acidic, stony soil and a cool continental climate with a winter temperature as low as –19°C.

Scrape Glen divides the garden in two, with the rich, peaty banks of the burn providing the main habitat for ferns. With over half the plants being of wild origin, the woodland ferns *Dryopteris filix-mas*, *D. affinis*, *D. dilatata*, *Blechnum spicant*, *Athyrium filix-femina* and *Gymnocarpium dryopteris* were much in evidence. Large colonies of *Polystichum munitum*, the North American sword fern, lined the banks of Scrape Burn, along with *Osmunda regalis*, *Matteuccia struthiopteris* and *Polystichum aculeatum*. A programme of mulching and soil enrichment has allowed the introduction of *Dryopteris aemula* and *D. expansa*, and *Woodsia ilvensis* has been planted in the walls near the stream. These planting schemes are taking place in an arboretum that has centuries of history, with links to some of the great plant hunters, such as Douglas, Wilson, Forrest, Ward and Sibbald. One multi-stemmed 1835 Douglas fir required five BPS members linking hands to circumscribe the trunk.

After lunch in the Conservatory Tea Room we decided, because of the rain, to move indoors to nearby Neidpath Castle, a 14th-century fortress on a rocky outcrop overlooking the River Tweed (36/236404). *Asplenium ruta-muraria*, *A. trichomanes* subsp. *quadrivalens* and *A. adiantum-nigrum* were spotted in the walls on the way in. After a long day, steeped in history and pteridology, we ended up sipping tea around the blazing log fire in the Mary Queen of Scots living room.

Many thanks to Heather McHaffie for a super day.

Ingleton Falls (34/695735), North Yorkshire – 15 September
(Leader: Jack Garstang) **Peter Hindle**

We met in the Waterfalls car park and walked up Swilla Glen (River Twiss) as far as Thornton Force, then crossed the watershed on open ground near Twistleton, and returned down the valley of the River Doe. Both streams have cut deeply into the dominant limestone, forming gorges in several places, but the presence of the North Craven fault means that other rock types, mainly slates and sandstones, are exposed in places. There is a Pre-Cambrian outcrop near Holly Bush Spout on the River Twiss. The area is best described as damp, rocky woodland.

The edge of the car park gave us *Equisetum arvense* and several large clumps of *E. telmateia* thriving at the bottom of a steep slope. Our path led us past abundant *Asplenium scolopendrium* and good examples of *Polystichum aculeatum*, *Dryopteris filix-mas*, *D. dilatata*, *Athyrium filix-femina* and *Polypodium interjectum*, which were all found well distributed along most of our route. *Asplenium trichomanes* subsp. *quadrivalens* was as plentiful as expected, but in places where green slate and sandstone were present good candidates for *A. trichomanes* subsp. *trichomanes* were noted. Where the path wound through heavily tree-shaded sections we were not surprised by the abundance of *Cystopteris fragilis*. *Oreopteris limbosperma*, often of considerable size, was found mainly on the less shady steep stream banks.

In an abandoned quarry close to Pecca Falls we had our only site for *Asplenium adiantum-nigrum*, which was growing on a well-drained outcrop of Pre-Cambrian rock. *Blechnum spicant* was nowhere profuse but sporadically present, and the same was largely true of

Phegopteris connectilis. It was not until we rose higher towards Thornton Force, where the path was more open, that *Asplenium ruta-muraria* was seen in any quantity.

Our short walk across open country to the River Doe allowed us to add *Pteridium aquilinum* to our list. The descent of the Doe valley, past Beezley Falls and Snow Falls gave us repeat sightings of most of the ferns seen on the ascent, exceptions being the two equisetums, *Oreopteris limbosperma* and *Asplenium adiantum-nigrum*. Our only find here of *A. scolopendrium* was in the wall of a garden as we entered the village. Any discussion *en route* centred on two ferns. Opinion had it that we could safely claim *Dryopteris affinis* subsp. *borreri* var. *robusta* in the Doe valley, but no decision was reached on a possible *D. expansa*; although the habitat seemed right and several members of the group had seen other specimens elsewhere, they were not sure.

photo: J. Garstang

The Money Tree, Ingleton, with thousands of copper coins embedded in its trunk

Thelma Tate, Nan Hicks, Alec Tate, Joan & Peter Hindle, Harvey Shepherd, Roy Copson, passer-by, Denise Copson, Frances Haigh, Cynthia Kelsall, Phillip Edwards, Elizabeth Crowther

The outing was planned for us by Jack Bouckley but, as he could not be there, leadership was assumed by Jack Garstang, who took us all out and brought us all back. Many thanks from all members who attended.

AGM, Holehird, Windermere, Cumbria – 13 October — Mike Porter

Our eighth AGM was held, once again, in the picturesque setting of Holehird Gardens and, once again, we opted for a full day meeting. Proceedings began shortly after half past ten with the customary coffee and biscuits, after which Barry Wright gave us a detailed and fascinating talk on the difficulties of identifying fern species from their spores and his attempts to put together a reference photographic collection on slides to facilitate this. Members appreciated the enormous amount of skilled and patient work that had gone into his research and into preparing the material for the talk.

Lunch, socialising, examining the various displays and looking round the still-colourful gardens occupied the next two hours until the AGM itself, which began at two o'clock. Here our main business was to find a new secretary for the group. Marjorie Garstang had occupied this position since the group's inception in 1993 and, with the increasing pressure of family commitments, felt it was time to hand over the reins. After much discussion two volunteers emerged, Frances Haigh and Peter Hindle, who will act as joint secretaries for a period of two years before relinquishing their responsibilities. We felt that limiting the period of office to two years only would make the post less onerous and encourage more volunteers. We are enormously grateful to Marjorie, whose hard work and devotion (aided by considerable powers of persuasion!) have done much to ensure the success of the group's activities over the years. Other business to be transacted included a review of the year's field meetings which, though affected by the foot and mouth outbreak, which devastated parts of Cumbria and had caused the cancellation of the South Lakes national field meeting, had been highly successful and enjoyable. A tentative programme was put together for 2002.

Official business having been concluded, we settled down to another excellent illustrated talk, this time by Fred Rumsey. Fred's topic was 'The Killarney Fern' and ranged over its history, its recognition, the gametophyte and sporophyte generations, conservation problems and its present distribution, the whole leavened with the speaker's enthusiasm and sense of humour. Specimens of both generations (collected under licence of the Portuguese Government in the Azores) were displayed. At the end of the talk there was at least one member of the group whose chief aim was to get out into the field without delay and continue the search for the single known Cumbrian site of this elusive and magical fern!

The meeting, which had been attended by 26 members, was brought to its traditional conclusion by the consumption of a delicious tea provided by members and the announcement of the winners of the fern competitions: Les Dugdale (indoor fern) and Jack Garstang (hardy fern).

CORNWALL

Rose Murphy

Field meetings have been very limited. Before access restrictions (due to foot and mouth disease) became really difficult, a few of us managed one meeting in February in the St Germans/Saltash area. In 1998 Chris Page had found a hybrid polypody in this part of Cornwall, one that had not been recorded in the county before. This was *Polypodium* x *shivasiae* (*P. interjectum* x *P. cambricum*). It was growing with both parents on the railway bridge at Wearde (20/423577). Two years later, Matt Stribley found the hybrid again, this time on a Cornish hedge near St Germans (20/341581). Three of us (Mary Atkinson, Ian Bennallick and RJM) revisited these localities hoping to find out why the hybrid was growing here and, so far as we knew, nowhere else in Cornwall. It proved a very interesting day, the three ferns growing largely on old mortared walls associated with railway stations in the vicinity, railway banks and landing quays where limestone from the Plymouth area had, in the past, been imported for use in the limekilns.

No further meetings took place until June, when the BPS held their Cornish excursion. This proved far more successful than was thought possible, as access to various localities had improved. Several members of the local group were present on one or other of these days and the report for this meeting, led by Ian Bennallick on the Saturday and Chris Page on the Sunday, is included in this issue of the *Bulletin*.